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LIEBIG,
HIS CHEMISTRY AND REVIEWERS.

BY

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No. XII.

Concluding Paper.

LIEBIG'S views respecting food and the process of nutrition having been placed fairly before the reader, with his theories of the metamorphoses of the various tissues, of the formation of bile and urine, and the evolution of animal heat, and this review having extended far beyond the usual limits, I purpose, in conclusion, to refer very briefly to a few of the remaining subjects comprised in the work. Of these, the explanations given of the *modus operandi* of certain substances in daily use, and of some medicines and poisons, are among the most interesting.

Tea and Coffee

contain a peculiar principle called *theine*, a nitrogenised compound having the empirical formula

$$C_8 N_2 H_5 O_2.$$

Now, it is a curious circumstance that this proximate principle, with the addition of water and oxygen, represents *taurine*, the peculiar azotised material obtained from bile (Paper VIII., p. 614). The formula,

$$2 (C_4 NH_7 O_{10})$$

represents two atoms of taurine.

The formulæ,

1 at. theine	=	$C_8 N_2 H_5 O_2$
9 at. water	=	$H_9 O_9$
9 at. oxygen	=	O_9
	=	$C_8 N_2 H_{14} O_{20}$;

are equivalent to the two atoms of taurine.

If we consider the sugar usually taken with tea as furnishing the carbon of bile, and the theine its nitrogenised material, whether the bile be formed in the blood or in the liver, we here have its essential constituents.

Reason and instinct are remarkably declared in the habits of animals respecting their food, and this analogy in composition between theine and taurine would lead us to infer that no more remarkable instance has yet been discovered than the selection of tea and coffee as articles of diet by civilised man for his own use.

Sedentary habits and deficiency of motion, or of active bodily exertion, diminish the quantity of matter separated from the living tissues; they accordingly lessen the amount of azotised material which becomes available for the formation of bile. The water and oxygen of the blood being alone equal to the conversion of theine into taurine, tea and coffee are probably capable of supplying that deficiency. Persons of sedentary habits are also extremely apt to take an *excess* of non-azotised food. Tea and coffee being capable of furnishing the proper azotised compound, the use of these substances may promote the conversion of that excess into bile, and accordingly may favour the combustion of carbonaceous materials, which would otherwise accumulate in the blood, and produce languor, lassitude, and oppression. If this be the action of theine, this substance must, at the same time, promote respiration and the evolution of animal heat.

That hot tea and coffee produce a greater rise of temperature in the system than an equal quantity of hot water would do, I am inclined to believe, although unacquainted with any experiments by which the fact has been determined. In this tea-drinking community, also, the remark has frequently been made to me, and, I dare say, to other practitioners, that tea makes people bilious. This would be particularly the case when taken with much sugar, and under circumstances, where its peculiar effects are not required, or if indulged in habitually in excess. Again, the renovating action of tea and coffee in fatigue or exhaustion, either of body or mind, is unquestionable. Liebig's theory affords an explanation of all these facts, and of others relating to the physiological action of tea,

and the most plausible account of the preference given by mankind to tea, and to some fluids of an analogous nature, over the infusion of other products of the vegetable kingdom.

Cocoa

owes its properties to another peculiar azotised principle, theobromine (Table II.), having a remarkable relation to bile. If an infusion of tea, coffee, or cocoa, contains only one-tenth of a grain of either of these principles, Liebig considers that their action cannot be considered as a nullity. Where there is an excess of non-azotised food and a deficiency of motion to cause the change of matter necessary for the supply of the component parts of bile, the health may be benefited by the use of compounds which supply the place of those which should be formed in a natural way. In a chemical sense, by virtue of their composition, the principles here mentioned are better adapted for the purpose in question than all other nitrogenised vegetable substances.

Alcohol.

Liebig states at page 239, "neither the expired air, nor the perspiration, nor the urine, contains any trace of alcohol after indulgence in spirituous liquors; and there can be no doubt that the elements of alcohol combine with oxygen in the body, that its carbon and hydrogen are given off as carbonic acid gas and water."

This is another of the propositions contained in the work, which, owing to the imperfect observation of phenomena of daily occurrence, has been objected to. Common experience, it is said, tells us that the odour of alcohol predominates in the breath of the drunkard; and experiments have clearly shown, it is further remarked, that alcohol has been detected in the fluids of the body. On these points we have to bear in mind that the odour of alcohol is not alcohol, that a state of inebriety is a state of disease, and that the fumes from the stomach are apt to be mixed with the expired air. Elsewhere, Liebig has remarked,—

"From experiments which I have made upon myself, I have arrived at the conclusion that alcohol taken into the stomach in a moderate quantity, does not again become expired by the skin and lungs. For example, when I drink a glass of hot spirits and water, and then breathe through a refrigerated glass tube, the condensed fluid in the tube contains no trace of alcohol. It may be presumed from this disappearance that the carbon and hydrogen of the alcohol become oxidised in the lungs, &c.; but it thence further follows that if the oxygen taken up does not bear a due proportion to the alcohol received into the stomach, if, for example, less be taken than the component particles of the alcohol require for their oxidation, a case is produced in which alcohol is expired. Such cases are self-explanatory."

It appears, moreover, that when alcohol is absorbed into the blood, it combines very readily and very rapidly with the oxygen of this fluid. The reciprocal action between its elements and oxygen is greater than that exercised between the elements of the metamorphosed tissues and oxygen, and accordingly alcohol prevents the action of the supporter of combustion, not only upon the products of the change of matter in the tissues, but upon the tissues themselves. This explains many phenomena resulting from the use of alcohol. Alcohol thus puts a limit to the change of matter in certain parts of the body, and it has the effect of converting arterial into venous blood, without the proper effects of the former upon the tissues being produced. The use of wine and of other alcoholic fluids increases the temperature of the body without the manifestation of a corresponding amount of mechanical force; hence the oppression and languor, and loss of power which result, and are obvious in women and children and persons unaccustomed to its use, after taking a very moderate quantity. Weariness, feebleness in the limbs, and drowsiness, show that the force available for mechanical purposes, in other words, the change of matter, has been diminished."

The conducting power of the nerves of voluntary motion is also diminished; hence, although a smaller amount of mechanical force be actually produced, owing to the oxidation of the alcohol, a larger amount of this force must remain available for conveyance by the nerves to the organs of involuntary motion. The circulation appears to be accelerated at the expense of the force available for voluntary motion.

In cold climates and cold weather alcohol supplies elements of respiration to the blood, or, in other words, fuel for the production of animal heat; it is a substitute for non-nitrogenised food. If its elements, either in the form of alcohol or in some form of food, are not supplied to the blood, the oxygen of the atmosphere must consume the products of the tissues for the purpose of maintaining the temperature essential to the continuance of life. In order to furnish these products man resorts to laborious efforts, but in the absence of all these sources of fuel, and of the means of resistance to the chemical action of oxygen, the vital force of the tissues is overcome by that chemical action, and death must be the inevitable result.

Vegetable Alkaloids.

One of the most extraordinary series of discoveries by the chemists is that of the active principles of many vegetable substances which produce energetic effects on the animal economy. Equally extraordinary

is the fact that those chemical principles which act chiefly on the brain and nerves, have a composition analogous to that of the substance of the brain and nerves. Liebig believes that all the active principles which produce powerfully medicinal or poisonous effects in minute doses are compounds of nitrogen; certainly, for the most part they are so. Their effects are dynamic; they accelerate, retard, or in some way alter the phenomena of motion in animal life; they are ponderable substances which disappear in the organism, a double dose acting more powerfully than a single one; such considerations, and others admitting but of one explanation, viz., that by means of their elements these compounds take a share in the formation or transformation of brain and nervous matter.

A feeling of amazement must certainly be experienced by the student who follows Liebig thus far, carefully and considerately, step by step, in his reasonings. He finds himself above or beyond everything in medical science which his preconceived notions had led him to believe attainable. By safe and sure gradations he appears to have reached an eminence from which can be viewed in the distance (for the most part obscurely, it is true), all the operations in the living economy. Light seems to shed its beams in directions which render perceptible the exact nature of many of those processes which appeared to him previously involved in impenetrable darkness.

The peculiar composition of brain and nervous matter differing from all other structures, was adverted to in the last paper, and it is well understood by physiologists that sensation, consciousness, volition, and every manifestation of intellectual life, depends not only on the existence but also on a certain quality of the brain and nerves. The animal organism produces the nervous structures out of substances derived from vegetables and employed as food—probably from albumen or fibrin, with the addition of some of the elements of the non-nitrogenised aliment. Other animal complex principles are produced in the living system, as gelatine, and probably fat (pages 526-29), but these may also be introduced, ready prepared, into the blood, and, like protein or its compounds, conveyed by that fluid direct to the respective tissues. From these considerations it follows that the vegetable alkaloids, or substances having an analogous composition, may be converted into the constituents of, or may take a share in the formation or alteration of, brain and nervous matter. As remarked by Liebig, there can be no absurdity in this doctrine.

The vegetable alkaloids are related in composition to no other constituent of the body excepting the brain and nerves; they all contain nitrogen, and possess alkaline properties. The substance of the brain contains a fatty acid. The energy of the action of quinia, cinchona, morphia, codeia, strychnia, and brucia, which produce effects in many respects similar, diminishes as the amount of oxygen in their constitution increases. No one of these substances can be entirely replaced by another, and their action is thus most intimately related to their chemical composition.

Liebig observes, "knowing as we do that the effects of opium and of cinchona are caused by crystallisable compounds, which differ as much in composition as in their action on the system, now that we are aware of the substance to which the energy must be ascribed, it would argue only want of sense to consider the action of these substances inexplicable."

The cerebral and nervous structures may be deteriorated by disease, or the power of forming the matter of them may be diminished, or the power in them of resisting the action of the chemical agencies may be lessened. Where such conditions may be presumed to exist, substances of a composition analogous to brain and nerves, and consequently adapted to form them, may be rationally employed for the purpose. It is thus rendered probable that the permanent strength imparted to the system by the use of quinine is attributable to its effect upon the process of the nutrition of the nervous structures.

Dr. Ure's discovery of the fact, that if after a meal a scruple of benzoic acid be taken into the stomach, in the course of a couple of hours subsequently the urine voided, amounting to five or six ounces, contains a large proportion of hippuric acid (which discovery has been confirmed by Liebig, Wöhler, and M. Keller), is, according to Liebig, of great physiological importance; it throws a light upon the *modus operandi* of various medicines, indicating that we can influence the nutrition of parts and the composition of secretions not only by nitrogenised, but also by non-nitrogenised chemical compounds received into the blood.

Prussic Acid and Sulphuretted Hydrogen Gas.

There are several very striking circumstances connected with the violent and fatal effects of the former of these substances on the animal economy.

1. The well known remarkable action of prussic acid upon iron when an alkali is present.

2. The constant presence of both iron and an alkali in the blood.

It is abundantly evident that prussic acid acts upon the blood. The remarkable change of colour and of the property of coagulability observable in many instances where animals have been destroyed by its means, is a proof in point. The precise chemical action produced has not at present

been determined, but Liebig suggests that probably a compound of iron incapable of absorbing oxygen is formed. In such a case the blood-corpuscles would lose the power of absorbing and supplying oxygen to the tissues, and of transmitting carbonic acid gas from them. The change of matter would not be instantly stopped, but the supply being arrested the latter must soon fail.

Sulphuretted hydrogen gas has also a remarkable action upon metals, and its effects are equally as frightful as those of the former substance upon the animal economy. Liebig throws out the hint that it has an effect upon the blood-corpuscles analogous to that of prussic acid.

These instances of the influence of medicinal agents on the chemical and vital transformations are given only as examples of the method of investigation by which the *modus operandi* of remedies may be learned. The author furnishes, also, a

Theory of Disease.

The following is my reading of this theory. It has been condemned as exhibiting an utter ignorance of pathology on the part of its author; I must leave the reader to judge for himself:—

The word "disease" applies to certain modes of manifestation of the vital force in the living system. Any *disorder* or *derangement* in the manifestations of the chemical forces in play does not constitute disease, except so far as that it influences the vital force: thus, more or less heat may be generated by the chemical action of oxygen on the elements of the food, without constituting disease; but if so little or so much heat be evolved as to disturb the vital force, disease is then engendered. A chemical compound may be received into the blood, it may be converted into carbonic acid gas by combustion, or into water, or it may be eliminated in the secretions in various forms, or in its original state, without producing or constituting disease; it is only when the manifestations of the vital forces, whether of the blood or of the organised tissues, are modified, that disease can be said to arise.

Since an equilibrium between the manifestations of the cause of waste and of supply (chemical and vital action) constitutes the abstract state of health; since that equilibrium depends upon the vital force overcoming all the causes of disturbance to which the body is incessantly liable; since death is the condition in which all resistance on the part of the vital force entirely ceases, disease, which is a tendency towards death, must occur when the sum of the vital force is *weaker* than the sum of the acting cause or causes of disturbance.

This notion of disease may be applied to the system as a whole, or to any of its parts separately considered.

According to this view disorders or disturbances may occur in the body without constituting disease, and the causes of such disturbances may produce the most variable effects, according to age, sex, temperament, season, climate, and the like, under all which circumstances different relative states of the vital and chemical forces obtain. Thus, a cause of disease added to the causes of waste, may at once annihilate the vital force in old age; the same cause in the adult state may produce only a disproportion between waste and supply; whereas in infancy it may occasion only an equilibrium between the chemical and vital forces.

In a strictly philosophical sense we do not pretend to cure disease; we may remedy disorders and quiet disturbances in the system. We may, for instance, weaken the disturbing action of oxygen, so as to reduce this disturbing action to an equilibrium with the vital force of a part, of a tissue, or of the whole system, but we know of no means of directly endowing a part, or the whole system, with life—with vital force. Death being produced by the chemical action of the atmosphere,—by a want of resistance on the part of the vital force,—we may produce changes in the chemical agents or forces; we may remove the causes, but we do not thereby cure the disease. Since every cell and every organ is originally built up, grows, and is renewed by an influence within itself,—an independent vital force, when the causes which have disturbed or arrested such growth or renewal are removed, then, by the influence of the same independent vital force, the actions in a part or in the whole system proceed in their regular harmonious course, and the ravages consequent upon disease are overcome, obliterated, and repaired.

The *duration* of a disease may be cut short, and *time* is a most important element in the rational treatment of diseases. We may put limits, by the use of remedies, to morbid processes of transformation, but this *alone* does not restore the condition of health.

In some diseases substances are conveyed into the blood, or even produced in the blood, which are incapable of assimilation. By the mere withdrawal of food the oxygen of the atmosphere is enabled to consume these foreign compounds. They are burned and removed from the body without leaving a trace behind them.

It is quite true that methods are employed in practice to exalt the resistance of the vital force; but they are for the most part, if not altogether, *indirect*. Blood-letting, for instance, diminishes the number of the blood-corpuscles, and thereby lessens the quantity of oxygen conveyed through the system, and accordingly weakens the chemical action on the diseased part. In an inflamed part the chemical forces in play, and tending to suppuration, gangrene, and other destructive processes, are diminished by blood-letting,

and the vital force, or the resistance to these chemical forces, is relatively increased. By excluding from the food all substances capable of conversion into blood a similar effect may be produced. By art we increase the vital force—relatively, and by so doing we enable this force to augment itself.

In chronic diseases, also, death is produced by the chemical action of the atmosphere. When the organs are diseased, so that they cannot perform the function of producing substances to support respiration; when they cannot effect those transformations in the food which enable it to combine with the oxygen of the air, the organs,—in the first place the fat, then the substance of the muscles, and ultimately the nerves and brain, are necessarily consumed.

Among many notes before me on the subject of practical hygiene and therapeutics, I select one or two promiscuously, by way of illustration.

Workhouse and Prison-Diet and Discipline.

From Mr. F. Pigou's "Plea for the Imprisoned," it appears to be a fact, that men who enter into our prisons strong and hale, leave them emaciated and with broken constitutions, and are never afterwards able to earn a livelihood by labour. Solitary confinement for one fortnight generally produces emaciation, and frequently death. When we learn that a pound and a half of bread, and half a pint of mint-water, constitutes the daily diet, with ten minutes to half an hour's exercise; when we consider that the bread is in all probability bad or indifferent in quality, we cannot be surprised that the vital force becomes reduced to the lowest ebb, never again to be recovered. Certainly there is some degree of consistency in the amount of exercise allowed as compared with the quantity of food A starving man will die the sooner if obliged to labour hard. But a set-off may be found even to this advantage in a limitation of the allowance of water, and of that degree of dilution so essential to the continuance both of the molecular and sensible vital motions. The circumstances which require to be considered as respects the diet of the inmates of workhouses and prisons, are not only age, sex, constitution, but most especially the amount of labour or exercise, and the temperature to which they are subject; the latter subject involving the points of the external temperature of the air, clothing by night and by day, and artificial heat by means of fires and flues.

The case of weaning infants and the selection of an appropriate diet has been before referred to. Diarrhœa is apt to set in, and arrowroot as frequently is employed for food. How often have I seen an infant starving upon arrowroot. The question has sometimes arisen, Shall arrowroot or some form of animal jelly be given, neither being appropriate? The infant requires a compound of protein in its food, without which the nutrition and growth of its muscular structures cannot proceed—its vital force cannot be sustained. Infants at the point of death from the use of diet almost completely non-azotised, recover rapidly after giving them azotised food.

The application of Liebig's principles in explaining deranged states of the system, indicated by the formation of gravel and stone, has been made by Dr. Jones, and was referred to in the last paper. A few words are necessary here on the subject of

Hepatic Diseases,

the diseases of hot climates and hot seasons. According to Liebig's principles the quantity of food consumed by individuals, where Nature is left to herself, is regulated in a great measure by the quantity of oxygen respired and the amount of heat given off by the body to the surrounding medium. Man, living in a hot climate, requires but little food, particularly of that which is already prepared for combustion, and for the evolution of heat. In a cold climate, on the contrary, he requires an abundance of hydro-carbonaceous material.

When, by artificial means, as by the use of stimulants, an Englishman in a tropical climate succeeds in enabling himself to take as much food as he was accustomed to eat at home, the whole of the carbon cannot be consumed. The food received into the system will not be balanced by the waste of the tissues. This it is which lays the foundation for, or produces, hepatic diseases; a rarefied atmosphere and incapability of muscular exertion, at the same time diminishing the amount of oxygen employed in respiration. Analogous circumstances are observable in our own climate in summer diseases. The diseases of the London draymen may also be cited under this head.

Dr. Searle, in a practical essay on the Causes, Nature, and Treatment of Liver Diseases, being the result of two-and-twenty years' observation and experience in the East Indies (Lancet, Dec. 11, 1841), refers these diseases to a general loss of vital power. He estimates the vital power of man at eight to six in England as compared with the East Indies.

Blood-letting is his chief remedy, preventive and curative. He considers that several pounds of blood should be lost for the purpose of restoring the equilibrium, and that a diet containing a reduced proportion of nutriment to the extent of one-fourth of the former supply, is absolutely necessary. According to Dr. Searle the effects of blood-letting can never be superseded by purging. There is no substitute for bleeding which acts by removing the resistance to be overcome.

Of those European soldiers who escaped disease in the east, it was ascertained that a

great proportion had bleeding piles; so constant was the coincidence that no doubt remained in the observer's mind, that the hæmorrhage acted as a prophylactic.

Dr. Searle, a practical man, seems to have anticipated Liebig in the application of these principles in hepatic diseases.

According to the above views of the nature of disease, the practical indications in its treatment may be thus generalised:—

A. To act directly upon the manifestations of the causes of disturbance in the economy, which are referrible to chemical forces; or,

B. To act indirectly on the vital force.

Thus, in the treatment of obesity or polysarcia, theory would direct the following indications:—

1. To supply additional oxygen to the system for the purpose of consuming the fat already accumulated.

a. By exercise or labour.

2. To withdraw from the system those materials which are liable to be deposited as fat.

b. By a diet of flesh more or less exclusively.

3. To employ substances for the purpose of promoting transformations which facilitate the combustion of all the superabundant hydro-carbon; those in particular which furnish soda for the formation of bile; as,

c. By the use of a large proportion of common salt.

It will at once be perceived that these indications are founded upon chemical principles.

These papers have far exceeded the space that they were originally intended to occupy. Much is contained in Liebig's work which I have been unable to touch upon, and I cannot do better, in conclusion, than to refer the reader to the book itself. Not a paragraph does it contain but indicates the deepest thought, and deserves the closest attention.

One of the greatest faults, if it can so be regarded, to be found with the work, is, perhaps, that its author has accorded to the general medical reader, at least of this country, too much credit for an intimate acquaintance with organic chemistry. The circumstance has rendered him in many places apparently obscure. But it must be obvious that as the knowledge of animal chemistry becomes diffused these obscurities will no longer appear; that Liebig's methods of investigation and much of his reasoning will be generally adopted; and that the principles of molecular chemistry will be found indispensable to a just and comprehensive theory of medicine.

It has been said that much contained in the work is not new; this may be fairly admitted. Three hundred pages of new matter at this time of day would be a phenomenon indeed! Liebig's "Treatise on Animal Chemistry" contains, in my humble judgment, more novelties than any other book of modern date. It should be remembered, also, that the author's reputation was established long before the publication of the "Animal Chemistry," which has formed the subject of this review, or of the "Vegetable Chemistry" which preceded it, and it is not only what is new that we have to consider in appreciating the merits and importance of this truly philosophical work, but also the facts, opinions, and deductions, whether new or old, to which Professor Liebig has given the weight of his authority.*

EMPLOYMENT OF ICE IN HERNIA.

The experience of Dr. Trusen, of Posen, goes to establish ice, administered internally, as superior to any other known agent for producing the cessation of the sickness and vomiting in strangulated hernia. A case of this nature occurred under his care, in which the hernia was of considerable size, and had been strangulated for some hours. The patient refused to submit to an operation. The vomiting and pain were irrepressible for any length of time by general or local bleedings, the external application of ice to the tumour, warm baths, during which the taxis was attempted, purging lavements, &c. At length Dr. Trusen administered clysters containing pieces of ice as large as a hazel-nut or almond, every five or ten minutes, consequent on which not only the vomiting ceased, but a copious evacuation of the bowels took place, and the hernia was spontaneously reduced. The sudden shock given to the system by the employment of ice in this way seems to be in no wise injurious; indeed, the diminution of the morbid sensibility in the stomach, &c., is the most conspicuous of the symptoms following its use. Dr. Trusen recommends the invariable adoption of ice in a similar manner, without loss of time, on the occurrence of strangulation in hernia, by which means a surgical operation might, he says, be often rendered unnecessary. He adds, also, that the same method of employing ice is attended with like advantage in subduing the vomitings which accompany an attack of cholera.—*Hufeland's Journal*, 1842.

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* In reference to my note of December 3rd (page 401) I purpose, with the permission of the Editor, to publish, at a future opportunity, a few remarks in addition, on the subject of the organic motions connected with the facts and arguments contained in the communications inserted at pages 342, 440, and 682.

ON A

PALLIATIVE MODE OF TREATMENT

FOR

VESICO-VAGINAL FISSURE.

By James Reid, M.D., London*.

This appellation (which is, perhaps, preferable to one more generally used, viz., vesico-vaginal fistula) is given to an aperture in the septum between the vagina and bladder, allowing the urine to pass from one organ to the other, instead of pursuing its natural course through the urethra. The miserable condition of those unfortunate females who suffer from its effects is so well known to most practitioners that I need scarcely advert to the great necessity which exists for some remedial agent, which may at least tend to alleviate it, and control some of its most distressing symptoms, if not possessing the powers of effecting a perfect cure.

This accident is a source of constant and most severe suffering to the patient, not unfrequently leading to other diseased conditions of the parts concerned, but also implicating the neighbouring organs, affecting her general health often to an extreme degree, and rendering the sufferer a source of disgust to herself and to those nearly allied to her. Fortunately in the present day, owing to the improved state of obstetric practice, these cases have become much more rare than formerly, and we now find them usually occurring in the lower ranks, and depending, in most instances, on the neglect or want of skill of their attendants, whose education for the branch they profess is generally left to their own discretion instead of being (as in most of the continental states) rigidly tested by proper examinations, either by the colleges or by proper persons appointed by Government for the purpose.

Although the fissure may be congenital, or may arise from other affections or accidents, such as venereal or cancerous ulcerations, calculi in the bladder, the vesico-vaginal operation for the removal of these calculi, amputation of the neck of the uterus, or from simple accidental inflammation and consequent sloughing, *maladroit* use of instruments, or in the removal of tumours from the vagina; still by far the greatest proportion of these cases are the result of long-continued pressure of some part of the vesico-vaginal septum during parturition, between the head of the infant and the pubes of the mother, when the urine has been allowed to collect in the bladder, thus distending it, and diminishing considerably the space through which the infant has to pass. Intense inflammation and the consequent death of the part so pressed upon are the effects, and in a short time it is thrown off in a state of sphacelus, leaving the aperture already described.

I have mentioned the pressure of the *head* of the child as the most frequent cause, but several cases are on record in which the long-continued compressure of the septum by the breech or shoulder has occasioned similar results.

The immediate symptoms are occasionally such as may not cause alarm as to the ultimate consequences; the patient perhaps complains of a feeling of numbness in the pelvis and down the legs; there may be retention of urine requiring the daily use of the catheter, or micturition is performed with difficulty, and accompanied by intense pain. In some instances the urine is passed without any considerable difficulty or pain, so as to lull suspicion as to what is going on, until at length about the third or fourth day after labour, or in some cases not until a fortnight has elapsed, the eschar separates, comes away, and an immediate flow of urine through the new passage is the consequence. The detachment of small shreds of the sphacelated part sometimes precedes that of the entire portion, and warns us of the approaching danger.

The seat of the fissure varies in different cases, as do likewise its form and extent: these will, of course, depend on the space implicated by the pressure. The aperture in those cases which I have had the opportunity of examining has always been in or close to the neck of the bladder; it may be transverse, longitudinal, or of an irregular rounded form. In order to ascertain these points, the best method is to pass a good sized catheter into the urethra—when, aided by the speculum and our fingers, we shall be able to determine them with greater facility.

The sufferings of the unhappy patient are in general most acute, for the constant flow of urine irritates and inflames the whole vagina and vulva, frequently causing ulceration, or the formation of abscesses either at the aperture or in different parts of the canal. A high degree of fever accompanies this condition of parts, and although the urine becomes more scanty in quantity, it is at the same time more highly charged with saline particles, rendering its irritating quality still greater than before. The *uterine* functions become irregular and disturbed to a great extent occasionally, the general health of the patient is destroyed, she is reduced in strength and form, and from being, perhaps, a robust girl, she becomes pale and emaciated, her countenance bearing a constant expression of anxiety.

For this distressing complaint various operations have been proposed and performed, but in numerous instances with very problematical results. In the cases where the *fundus* of the bladder has been involved (if we take the testimony of Jeanselme,

* Read before the Westminster Medical Society, Dec. 17, 1842.

Velpeau, and others) there is much reason to believe that very few permanent cures have followed these operations. Many of them are of a most painful, tedious, and sometimes even dangerous nature, requiring the hand of a skilful and dexterous operator. The operations in those cases even in which the aperture is situated near the neck of the bladder, have frequently failed, and the condition of the patient has been rendered more afflicting than before.

Cauterisation, either by the nitras argenti, or by the actual cautery (the former the most safe) is attended with much difficulty and uncertainty, as it is requisite that the *complete surface* of the callous edges should be touched in order to produce any good effect; and should it be effected, these portions may separate and come away, thus enlarging the aperture.

Paring off the Edges of the Fissure and the employment of Sutures.—A most difficult and serious operation, which in some instances has been followed by the death of the patient.

Lallemand invented an instrument for keeping the lips of the aperture together without the use of sutures, which is highly spoken of by Velpeau; but by the description of it, it would seem to be difficult of application. The instruments of Dupuytren and Laugier are apparently modifications of it.

Anaplasis was proposed by Velpeau, and performed with apparent success by Jobert, though some of his cases are said not to have been cured. The operation consists in paring the edges of the wound by a bistoury, then placing between them a fleshy layer, cut from the labia majora, or from the nates, and maintaining these together in a proper position until they have united. This is effected by applying sutures by means of a catheter introduced into the urethra. The division of the pedicle of the fold is not performed by M. Jobert until the thirtieth or fortieth day after the operation.

Obliteration of the Vagina has been proposed by M. Videl in some cases, by paring the edges of the vulva, and maintaining its edges in contact by sutures. As the accident generally occurs in childbearing-women the proposal seems extraordinary, although M. Videl has performed it only in those cases where other means have failed. The operation, however, I believed has failed to accomplish even the effect proposed.

Setting aside the doubtful results of some of the above operations, there are many women who, suffering from the results of vesico-vaginal fissure to a very serious extent, are still resolutely opposed to submit either to the use of the caustic or the knife. Hence it becomes still more a desideratum to find some palliative means of affording at least temporary relief in such cases, and various methods have at different times been employed to effect that purpose.

In the year 1835 I was impressed with a notion that the caoutchouc cloth might be adopted as a mechanical remedy in cases of this description; and in a small work which I published at that time I mentioned my intention of trying it should I meet with an opportunity for doing so. It was not, however, until the commencement of 1839 that a case fell under my notice, and on further consideration I thought that the simple India-rubber bottle might even be preferable, owing to its elasticity.

The aperture forming the communication between the vagina and neck of the bladder is occasionally large, and the intention of the instrument, therefore, would be, that it should effectually form a partition or complete plug between these two organs, thus preventing the constant flow of urine through it, and the consequent great irritation, inflammation, and thickening of the callous edges.

The apparatus consists of a common India-rubber bottle, of moderate size, but free, if possible, from those lines and ornamental tracings which are placed on some, as these render them more liable to burst on distention, owing to the unequal thickness. It should be of a pyriform shape, without any shoulders or sudden bulging out from the neck or stalk of the bottle, as the latter form interferes with the ready extraction of the instrument when required, or at least occasions unnecessary pain in removing it. To the neck of the bottle is attached a mount, containing a female screw, at the side of which is a small stop-cock. Mr. Weedon, the instrument-maker, has since suggested, and I think properly, that the air-valve now commonly used in the Macintosh cushions, &c. would be better adapted for the purpose. The other portion of the apparatus consists in a small *condensing* syringe, of the shape and size of the common breast-pump, the distal end of which terminates in a male screw, corresponding with the one attached to the bottle. The latter being well oiled or larded, and the air pressed out of it, is folded longitudinally, and carefully passed up into the vagina, until the lower end or mount is at the vulva. A certain portion of air is now *drawn up* into it by the simple removal of pressure, but it is not sufficiently distended till the condensing syringe is fixed and a few strokes of the piston used. The number required must depend on circumstances, but will soon be known by the patient complaining that the further distention begins to give pain. The stop-cock is now turned, the syringe disengaged, and a napkin applied to the vulva, fastened as usual.

Some inconvenience may, of course, be occasioned at first by the use of the instrument, and if the parts be in a very irritable state

much pain may accompany it, but this is to be obviated by complete rest, the use of the hip-bath, and by warm vaginal injections. The bottle is to be removed for a short time every evening, previously allowing the air to escape by the stop-cock; the vagina is to be gently syringed out with warm water, and the bottle, after being washed, is to be replaced. It is, however, much better to be provided with two or even three bottles, which should be used alternately, as the heat and urine acting upon the caoutchouc constantly, render it more likely to burst or wear out. An oil-skin covering, adapted to the shape of the bottle when distended, and changed occasionally, will aid much in preventing the action of the urine on it. The comfort resulting from the use of this instrument is soon perceived, as it prevents that constant flooding of water which had previously taken place, excoriating the parts, and rendering the bed and clothes almost unfit for use.

Although I have not found the frequent use of the catheter required, still at the commencement of the treatment it might be advantageous to combine it if there should be any difficulty in passing urine by the natural passage.

After I had commenced the use of this instrument, a medical friend to whom I mentioned it, thought he recollected a somewhat similar mode of treatment described in one of the early volumes of the "Medico-Chirurgical Transactions." On searching through them I found in the sixth volume a report in 1815, by Mr. Barnes, surgeon to the Exeter Hospital, in which he recommends, on the suggestion of an eminent London surgeon, Mr. G. Young, the use of "a gum-bottle of suitable size, to one side of which a piece of sponge, flat, and of the size of a dollar, is previously sewed, to cover the aperture into the bladder, and that the patient, by introducing a finger into the vagina, and compressing this, might at proper intervals allow the urine to pass. This answered for two hours, but if the urine was not then removed by the catheter it oozed out by the wound. The catheter was, therefore, introduced every two hours during the day, and kept in constantly during the night, the bottle being withdrawn till morning." One case seems to have been cured by the use of the above instrument in the hospital, at the expiration of nine months, the catheter being employed several times in the twenty-four hours, up to the end of that period. Two cases were uncured, and in two others, owing to the narrowness of the vagina, it was considered needless to attempt its employment.

Now, in hospital practice, where the patient is constantly under the eye of her medical attendant, and can enjoy complete rest, this plan may succeed; but, still, I have considerable doubts whether the success might not, in the above case, have depended in a great measure on the repeated use of the catheter during the day, for nine months, and its constant employment at night.

But with those patients who from circumstances cannot or will not benefit by a residence in a hospital, with such advantages attendant upon it, for months together, it would not be likely that such good effects would arise from the above plan as resulted in the first case; for so frequent an use of the catheter by the medical attendant would be attended with much trouble, and even were the patient taught to introduce it herself, little reliance could be placed upon her using it properly for so long a period.

As this untoward accident happens, too, generally in the lower ranks, where the female is obliged, if at her own residence, to undergo some fatigue, and perhaps hard labour, in order to aid in gaining a livelihood, absolute rest for a lengthened period would be almost impossible.

In the two undermentioned cases it will be remarked that the catheter was not used (except once, when there was retention of urine for eighteen hours) during the treatment, although I have no doubt that had circumstances permitted it, great advantages would have been derived from its occasional employment at the commencement of the treatment. Each of the patients had likewise to walk a considerable distance to work, besides attending to her domestic duties, which circumstances militated materially against the curative process.

Desault had formerly recommended the use of a gum-bottle, filled with cotton and coated with elastic gum, in this complaint. Others, again, used *cork*, or wax, of proper form, &c., but on a trial of these it will be found that if of sufficient dimensions to plug up the aperture, their introduction or removal from the vagina is attended with very great difficulty. In the case of Mr. Barnes the urine ran off at the expiration of two hours, unless the catheter was again introduced, and it does not appear that the urine ever passed by the natural passage without mechanical aid.

To prove that the caoutchouc bottle alone was not sufficient to effect the object desired it will be observed that in the second case the slightest defect in the stop-cock completely did away with any good effect, and I therefore look upon the power of distention in the instrument as one of the essential means of treatment. The daily removal of the instrument after passing urine, and washing out of the vagina, will likewise allay inflammation and prevent the accumulation of any irritating secretion about the affected part.

Case 1.—A young woman, ætat. 24, applied to me, in the year 1839, with vesico-vaginal fissure. She had been delivered of a still-born male child in 1833, after a very lingering labour, during which the urine collected in the bladder; inflammation and

sloughing of the vagina occurred, and vesico-vaginal fissure was the result. The urine escaped in large quantities, and the parts, owing to this circumstance, were in a constant state of inflammation. She had, at various times, had severe fits of illness, the result of the affection, and from being originally a strong robust girl she became emaciated and hysterical, was not able to walk in an upright posture, but suffered agonising pains about the vagina, back, and loins, with a constant sensation of dragging and forcing down at the lower part of the abdomen. She had, she informed me, attempted several times to enter into service again, but her sufferings had prevented her keeping any place for more than a very short period.

In March, 1837, she was admitted into one of the London hospitals, and was operated on by an eminent surgeon. She is unable to describe the nature of the operation, but says that it was one occupying a long time, and of a most painful nature. For the next month, during which time she kept her bed, she was much benefited, and could pass her urine by the urethra, very little escaping by the vagina. On getting out of bed, however, at the end of the month, the adhesions immediately separated, and she became in as bad a plight as ever.

In June, 1838, she entered another hospital. Whilst here, a gum-elastic catheter was kept constantly in the bladder, different lotions were injected into the vagina, and medicine was given internally to improve her general state of health, which was much out of condition; but no benefit whatever followed this treatment. *A large sponge* was then kept in the vagina, but as this soon became saturated with urine, she says that it increased the pain without being productive of any corresponding benefit.

In March, 1839, I commenced the treatment with the India-rubber bottle. There was at this time a large aperture in the neck of the bladder, about an inch long, through which almost all the urine escaped. The surrounding parts were inflamed and exceedingly tender to the touch, owing to the constant irritation produced by the flow of urine over them. The patient had an emaciated and anxious countenance, and there was constant bearing down and a sensation of forcing about the vagina. She suffered increased pain at the catamenial periods, but this discharge was very irregular, both as to time and quantity. Her sufferings she described as intense, and without much remission; to such an extent, indeed, did they reach, that she confessed she had more than once resolved on self-destruction.

April 8, 1839. She has now worn the instrument three weeks. Very little urine flows per vaginam, but it is passed voluntarily by the urethra; when the forcing sensation above described is felt however, she cannot pass her urine easily, but at other times she has tolerable command over it. She says she feels more easy, and has more comfort at present than at any other period within the last six years, excepting the month after the operation described. She is now able to walk daily from Somers-town to an upholsterer's in Holborn (where she has obtained employment), and back again, without any great difficulty. No pain is produced by the action of the bowels if they are not confined, but if hardened fæces pass, a feeling of great forcing and bearing down is the result. Castor oil relieves her, however, at these times. She describes that the introduction of the instrument at first occasioned her great pain, but it is now very much diminished. She takes the apparatus out every evening, and after washing it, and injecting the vagina with warm water, she immediately re-introduces it. The condensing syringe is used till she feels the distended bottle produce a sensation of tightness. She is now able to walk for a long distance on even ground, but going up or down stairs tries her much.

April 25. The catamenial discharge has again re-appeared, and during this time she was unable to continue the use of the instrument, the forcing pains were so great. Directly after the termination of the period, however, she again introduced the bottle. She says that even during the two days when the instrument was not worn, very little urine passed by the aperture, but she had not the full power of passing it by the urethra, suffering indeed, from its retention. She now feels much easier and is more cheerful, evidently, than formerly. There is still considerable irritability about the bladder, and the patient is obliged to pass her urine every two hours, but it is by the urethra.

Up to June 24th she had improved in health and strength so much, that she had undertaken the situation of cook in a family, had gained flesh, looked very well, and since April the catamenial discharge had taken place regularly. She had even engaged herself to be married, and from feeling so much better had ventured to go without the instrument for several days together, on one of which she had walked to Greenwich fair and back, accompanied by her lover. This imprudence, and perhaps *others*, produced a bad effect. Since this time she has complained of severe pain, and for the last two or three days there has been an escape of urine by the vagina in small quantities, tinged with blood, but the principal part still passes by the urethra. She suffers much pain whilst sitting down.

July 5. Notwithstanding the above relapse she has continued to over-exert herself in lifting heavy weights, &c. She complains of great pain and cutting sensation about the region of the bladder, and this is much increased on pressure. Her present visit

was owing to retention of urine for eighteen hours; the catheter was therefore passed. She returned home, and kept her bed for seven days, fomenting the parts frequently, and taking an opiate every night to relieve the pain, which was severe.

On the 6th the urine again escaped freely from the vagina, mixed with blood, and soon after was accompanied by a purulent discharge. As she complained of intense headach, and had a full strong pulse, a small quantity of blood was abstracted from the arm, which relieved her much. She still attended occasionally as out-patient at St. Giles's Infirmary, as she lived too far off to be visited. The instrument was again used, but there was now always more or less pain, and a constant discharge of purulent matter, occasionally tinged with blood. During the time that the instrument was in the vagina she could pass her urine voluntarily, but not when it was removed, as was the case formerly. She is obliged to go occasionally for some hours without it, and the water then runs off per vaginam. The vulva and thighs are much chafed.

August 10. She has again taken work as a sempstress in Holborn, and persists in walking thither from Somers-town and back daily. Is much depressed in spirits, and has again relapsed into a bad state of health. At this time she went into the Middlesex Hospital with erysipelas of the head and face, and remained there a month.

Sept. 15. On leaving the hospital she again applied to me, and as I found that she was evidently suffering from strong inflammatory symptoms, and yet persisted in using a great deal of exertion, refusing to come into the infirmary, where she could be under my constant inspection, I recommended her strongly to try and gain admittance into an hospital again. She accordingly entered University College Hospital, under the charge of Mr. Quain. By the use of the speculum, the fissure was discovered to be of considerable extent at the neck of the bladder, and as there was much local inflammation, she remained under treatment some time, in order that it might be subdued. An India-rubber bottle of *larger* size was then introduced, but it occasioned great pain and a return of the inflammatory action. This was likewise subdued, the instrument again used, and the effects were as beneficial as before, she leaving the hospital after some time very much improved both as to the power of retaining her urine and of passing it by the urethra.

She called on me in the commencement of December to say that she was now quite well, suffered no pain, could retain and pass her urine at will, and was going into another place. Her looks were very much improved and her spirits high.

I met her about six weeks after this, in the street, and she still gave the same good account of her state.

I had lost sight of her altogether until a few months since, when she called on me and informed me that she had been living in the country for the last eighteen months, had married, and had become pregnant twice, but miscarried. Her ruddy complexion and robust form bespoke perfect health, and she says that her former ailment does not trouble her.

In this case there were great difficulties to contend with, owing to the patient being very intractable, persisting in using great exertion, and taking long walks, at the very time when she ought to have been enjoying complete rest. Her state of health, too, latterly became much deranged, dependent, to some extent, on mental causes. About six years had elapsed between the time of the accident and the commencement of her treatment under my care, and during the whole of this period she had been in a constant state of suffering and ill health. It was, therefore, apparently a very unfavourable case in which to make trial of any palliative mode of treatment. The patient was seen frequently by Mr. Burgess and Mr. Wells, at the infirmary, and by other medical friends.

Case 2.—M. R., ætat. 28, residing in Bull and Gate-yard, High Holborn, was delivered, Dec. 26, 1839, by the crotchet, of a very large child, after a tedious labour. Secale had been administered by the midwife repeatedly, although the patient had passed no urine for several hours, the bladder being much distended until the catheter was introduced previously to the employment of the perforator. Partial paralysis of the bladder followed, and continued until the middle of January, when a large slough separated from the vagina, leaving an aperture into the neck of the bladder, through which the urine escaped almost as quickly as it was secreted. The patient's health soon became affected to a considerable extent; she complained of great weakness and feeling of numbness in the lower extremities; of violent pain and dragging sensation about the back and loins; spasms in the lower part of the abdomen; and she became much emaciated in appearance. The urine ran off by the vagina constantly, saturating her clothes and the bed, so as to make the room, from its offensive odour, most unpleasant to her relations. In February the caoutchouc instrument was employed, and the large escape of urine was at once arrested, a small quantity only escaping by the aperture, the patient now being able to pass the remainder through the urethra, but only whilst in a kneeling posture. After wearing the bottle for some hours, however, it was found daily that the urine escaped freely by the vesico-vaginal aperture again; the cause of this was not for some time discovered, but at length was found to depend

upon the imperfect construction of the stop-cock, which allowed the air to escape, although very slowly, and thus occasioned a partial collapse of the bottle, preventing its perfect adaptation to the aperture. The defect was soon remedied by Mr. Weedon's employing a superior workman to manufacture this part of the instrument.

The patient continued to complain of great pain in the back for several weeks, and was not able to walk in the upright posture, but stooped considerably. The bowels were very constipated, seldom acting without the employment of aperients. By the month of May she had gradually improved in every respect, and has been able to resume her work, walking to the city and back again, sometimes without wearing the instrument. She is able, however, to walk as well when it is introduced, as without it, it causing her no inconvenience. The catamenial discharge has latterly been quite regular.

June 1. The patient reports that her health is excellent, she sleeps well, suffers no pain, and there is little urine passed except by the urethra; none, in fact, runs off provided she takes care to void it at proper times, and even when pressed by a strong desire to micturate, she can retain her water for above half an hour very well. When the instrument is removed, she can now pass her urine easily in a full stream. Does not now suffer to any extent from the bearing down; feels much better, can perform her household duties, and go up and down stairs, without pain, which was formerly distressing to her on similar occasions.

July. Reports herself as feeling better than ever since her accident; there is no irritation or smarting about the vagina or vulva; and she now requires no aperient medicines.

On a subsequent occasion, by examining with the speculum, a very small aperture was observed, and touched with the nitras argenti. I was in great hopes at one time that I should have been able to report this case as completely cured. The patient, however, is able to leave off the use of the instrument at intervals, and finds that the passage of even a small quantity of urine is controlled by its use. There has been a predisposition to prolapsus uteri since the time of the accident, and owing to this, as well as to an occasional small escape of urine per vaginam, she continues the employment of the apparatus. In order to show the comfort she has experienced from it, I may perhaps be allowed to mention that in one of her visits to the instrument-maker, to obtain a new bottle, she declared (as he informs me) that she would rather go without food for a time than be deprived of the use of the instrument. Those medical friends who saw the patient formerly, and after the lapse of a few months, remarked her great improvement in appearance, health, and spirits.

Case 3.—E. W., ætat. 28, was sent to me by Mr. Hillas, of High Holborn, in February, 1842; she had been confined in the country, in Dec. 1840, after a labour of twenty-four hours' duration, during which period she had passed no urine. The perforator, by her account, had been employed to effect delivery, but without the previous use of the catheter. Within three days after, a large quantity of urine escaped suddenly by the vagina, a slough passing with it; and since that time she has been unable to retain her water. She had been examined about a year after the accident at one of the London hospitals, by a surgeon and the physician-accoucheur, but nothing particular was done for her, and after a short time she was discharged.

On examination a very small opening was detected in the cervix vesicæ. She suffers occasionally from dragging pains in the back and loins, but they are not of an intense nature. The catamenia did not appear for five months after her labour, but latterly she has been quite regular in that respect. She commenced the use of the instrument immediately, and in the course of two months called on me to say that she was much more comfortable, as before its employment she passed very little urine by the natural passage; whereas, at present, a small quantity only escapes by the vagina; there is no pain in that part, and although she is in service, and obliged to perform laborious work, she suffers very little.

Mr. Hillas informed me lately that the patient had been able to discontinue the use of the instrument, and continued much better.

The great difficulty I have experienced as to this apparatus is in obtaining caoutchouc bottles of the proper pyriform shape, and with a plain surface. Any irregularity in its substance renders it more liable to give way after using it a few weeks, especially as the urine is constantly acting on its surface. As I have before said, I think that an oil-skin covering, adapted to the bottle when properly distended, and changed frequently, would obviate this difficulty to a great extent.*

One essential point is to subdue the local inflammation as much as possible before using the instrument, and, if much pain be experienced after its introduction, to remove it occasionally and syringe the canal with warm water repeatedly; this, combined with

* Dr. F. Bird mentioned in the Westminster Society, during the discussion which followed the reading of the paper, that he had recently known of a case in which the caoutchouc bottle, used as a pessary, was shielded from the action of a gonorrhœal discharge by a coating of wax, which answered the purpose, and allowed of the use of the same bottle for a considerable time.

perfect rest, low diet, and cooling aperients, will in a short time enable the patient to resume its use without much trouble.

The instrument should always be removed once daily, and the vagina well syringed, so as to prevent any collection of mucus or irritating matter. If possible, it is better to have a second bottle, using it on alternate days, allowing the one removed to remain in water for a time, and then to be exposed to the air until again required.

I some time since reported to the society that I had found the above instrument very convenient and useful as a pessary, especially in the cases of married women, owing to its easy introduction, and removal at night, the contrary being an objection to which the common ball-pessary and some others are liable.

RARE PARASITE IN THE HUMAN LIVER AND PORTAL VEIN.

THE *fasciola hepatica* or *distoma hepaticum*, though often met with in the liver of ruminant animals, is seldom found in the human subject; and in those cases in which its presence has been verified, it had till lately been seen only in the gall-bladder and biliary ducts within the duodenum, and a few other parts of the intestinal canal. Rudolphi denied that it ever inhabited the veins; a recent case, however, proves the incorrectness of such an assertion.

M. Duval, demonstrator of anatomy in the medical school of Rennes, had in April, 1840, a subject for demonstration in a man about forty-nine years of age, a tiler by occupation, who had died in the Hôtel Dieu of Rennes, after a very brief medical treatment there. The vessels not having been injected, they remained, of course, as well as the viscera, in the same condition as at the moment of death. M. Duval had demonstrated the mesenteric and splenic veins, and was proceeding to speak of the vena porta, when, placing his finger on that vein, he distinctly felt something beneath move away from his pressure.

He announced the fact to his class; and on carefully opening the porta discovered, in the midst of some fluid blood, a distoma hepaticum of large size. Proceeding with his investigations, M. Duval brought to light two other parasites of the same species in the sinus and sub-hepatic portion of the portal vein, and several more in its ramifications within the liver. In all five or six were found. The parietes of the porta and its branches presented no trace of inflammation or erosion, and the liver was healthy. The entozoa in this instance were of larger size than those usually found in the human bile-ducts. None appear to have been discovered in other parts of the viscera.—*Gaz. des Hop.*, Suppl., Dec.

DROPSY OF THE OS UTERI.

UNDER this name M. Jobert describes tumefaction of the mouth and neck of the uterus, which most frequently occurs among women of a lymphatic temperament, being, according to his observations, confined to those who have never borne a child, and who menstruate but feebly. Examined by the aid of the speculum, the os uteri is seen to be so much swollen as almost wholly to conceal the orifice, and it gives on pressure a sense of fluctuation. It is uniformly pale and flabby, and may sometimes be ulcerated, but it is not in general organically diseased. On carefully introducing a bougie through the orifice, a quantity of transparent, flocky, light-coloured fluid usually escapes from the cavity of the uterus; and, at the same time, the neck and mouth become relieved of a portion of their tumefaction. This event may happen consequent on a spontaneous discharge of the fluid, and always attends more or less the recurrence of the menstrual discharge. The cause of the affection has been attributed to a distention and superabundant secretion of the glandular follicles of the neck and mouth of the uterus. For its treatment after the evacuation of the contents of the uterus, M. Jobert advises free incisions to be made in the os uteri, in the direction from centre to circumference (*dans le sens des commissures*). The granulation of the wounds thus made, produces concurrently, as he says, an enlargement of the orifice of the uterus, which effectually obviates a return of the disease.

REMARKABLE CASE OF CONGENITAL SMALL-POX.

A WOMAN, twenty-four years of age, entered the Maternity Hospital in Paris to pass her first confinement. Labour commenced two days after her arrival; and after the lapse of fourteen hours (*jours*, says the original, but this is evidently an error) she was delivered of a female child. The face, scalp, and different parts of the child's bed were covered by a pustular eruption, which was soon recognised to be veritable small-pox. The mother retained the marks of vaccination, and stated that she had never had the small-pox; nor during her pregnancy had she had any connection with persons suffering under that disease, nor even heard of its prevalence in her neighbourhood. Only, about eight or ten days before, she had gone to see a patient at La Pitié, near whom lay another patient in the small-pox. She had paid no attention to this circumstance till recalled to her recollection by minute inquiries. No untoward effects ensued, either to mother or child, and both left the hospital in perfect health soon afterwards.—*Bulletin de l'Acad. Royale.*

KING'S COLLEGE HOSPITAL.

CLINICAL REMARKS

ON

CASES OF STONE IN THE BLADDER.

DELIVERED IN JANUARY, 1843.

BY

WILLIAM FERGUSSON, Esq.

The opportunities of illustrating the subject of lithotomy having been more numerous than I anticipated at the commencement of the session, I mean again, at our meeting to-day, to direct your attention to the operation, having now less hesitation in doing so than at the earlier part of the winter, as it is to be presumed that you are now so far familiar with surgery as to appreciate, in some degree, the difficult subject to which I am about to refer. Having also the means before us of contrasting lithotrity and lithotomy, I shall make some observations with this object, but shall first proceed to refer to the case of lithotomy at present in the house.

Thomas Lawton, ætat. 66, admitted 7th December, 1842; enjoyed good health until October, 1836, when he first began to pass red sand in his urine, especially after walking much. About a year after he was sounded, but the presence of stone was not detected. He now felt great pain in the glans penis, and there was frequent stoppage in the stream of urine. In two years more he was again sounded with uncertain results. His distress has increased up to the present time, and latterly he has suffered much from the usual symptoms of stone. About fourteen days since he was again sounded, and the true cause of his ailments was detected for the first time. Was in the army in his youth; is a native of Staffordshire, and is now engaged in pottery business in that county. Has no relations affected in a similar manner. Has never been a drinker; is in strong general health, stout, bulky, and fat.

8. Sounded, and the presence of a large stone ascertained.

17. Lithotomy performed to-day; wound deep, hæmorrhage free, stone large. Wound bled at intervals during the afternoon. Tube used, but stuffing not deemed necessary.

21. Symptoms favourable since last report. Tube removed to-day; adhesion of considerable extent of wound; part opened up again to permit free escape of urine.

Jan. 16, 1843. Has had no unfavourable symptoms since the operation. Wound nearly closed, though still permitting free escape of urine.

The stone—lithic acid, oval shape, weighs four ounces, circumference eight inches and a quarter by five and three-quarters.

In the present day, when a surgeon undertakes the treatment of stone in the bladder by operative means, one of the first points which he endeavours to determine is with reference to the propriety of adopting lithotrity. In this instance I had no hesitation in deciding that such a mode could not be deemed advisable, for the size of the stone, as indicated by the sound, was such, that its destruction could be effected only by very frequent application of the lithotrite, which, when necessary, almost invariably render the latter stages of this method of treatment exceedingly painful and uncertain in their results. The pain which this patient experienced in the process of sounding did not appear so great as to preclude any attempt at lithotrity, but I was induced to select lithotomy chiefly on account of the size of the stone.

Preparatory to the operation I deemed it advisable to keep the patient quiet for some days, to permit the mucous membrane of the bladder to recover, in some degree, from the additional irritation produced by a long journey; to watch also the effects of change of air, situation, and diet upon him, and to make sure, by the exhibition of laxatives, that the bowels were thoroughly cleared out, a matter which I deem of great importance in all such cases, more especially in a person so stout as the one under our present notice.

In anticipation of the somewhat formidable character of the operation, as well from the apparent depth of the perineum as the supposed size of the stone, I provided myself with all the requisites for such an occasion, in addition to the ordinary knife, forceps, &c., which are generally required. I had beside me a probe-pointed knife, to enlarge the wound in the neck of the bladder, should that be requisite; longer and more powerful forceps, to give more command over a large stone; a strong lithotrite to break the stone through the wound, should that be deemed necessary; and a syringe, with a tube, to wash the fragments out of the bladder in the event of the stone breaking.

Thus prepared, then, I proceeded with the operation, and having introduced the staff and tied up the patient in the usual manner, made the different incisions, passed my finger into the wound, then the forceps, with which I seized and extracted the stone.

Some of these steps are worthy of separate consideration, and I shall, therefore, bring them under your careful notice. Having on a former occasion referred particularly to the introduction of the staff and tying up the patient, I need not dwell on these points to-day. The external incision, however, was of unusual character, having been much longer than is usually recommended for this operation. It was fully six inches in length, and various reasons induced me to be so free with the knife in this part of the proceeding. The quantity of fat on the hips and perineum

showed that the wound must be very deep ere I could reach the bladder, and the supposed magnitude of the stone indicated the necessity for a free external opening. There is a utility in such an incision which appears to me to have been in some measure overlooked; it is this, that after the skin has been divided, although the point of the knife may have been thrust half an inch deep, when the edges of the wound separate the fat and cellular tissue seem to be on the same level as the skin; in other words, the perineum is made nearly half an inch shallower. This observation will be better understood should you ever see lithotomy performed with a short external incision: you will then see that instead of the edges separating, and permitting a ready access to the deeper parts, they will form a tight band over the forefinger of the left hand when it is thrust towards the neck of the bladder. You might remark that I began my incision higher up, i. e., nearer the scrotum, than is usually recommended, a plan which I invariably adopt when I cut into a deep perineum; but I wish you to understand distinctly that the wound here is carried through the skin only, and that the subsequent steps of the operation are all conducted at a considerable distance from this part. I thus, as I imagine, obviate any obstruction to my finger, such as that just referred to, and facilitate the use of the forceps as well as the extraction of the stone. I must caution you against limiting the steps to the upper part of the perineum; by doing so you would confine yourselves to the narrowest part of the aperture in the pelvis, and be so close under the angle of the pubes that it might be impossible to extract the stone. Although, then, I have no hesitation in dividing the skin near the scrotum, I am particular in keeping low down afterwards, both for the reason stated as well as for the sake of avoiding the bulb of the urethra, or the artery leading to that part.

When the skin and superficial cellular texture were divided, I then pushed the point of the forefinger of my left hand upon the part where I placed it on this drawing, i. e., between the erector penis and accelerator urinæ muscles, pressed it against the staff, introduced the point of the knife into the groove, about the middle of the membranous portion of the urethra, and then carried it onwards, so as to effect the internal incision. This part of the wound is small in proportion to the external, and in my own practice it is very limited indeed.

I consider that the textures about the neck of the bladder are more readily extended than the skin, and therefore that the deep parts of the wound can with facility be dilated to the extent requisite for the extraction of the stone. A wound of these parts of greater extent than this I deem additionally dangerous, whilst the free use of the knife on the skin is comparatively of no moment. The internal opening should, in my opinion, be made partly with the knife, finger, and forceps, for when the blades of the latter instrument are opened they have a considerable influence in this respect. I deem it almost impossible to extract a stone about the average size through what is called a clean cut in the neck of the bladder; and a clean incision of sufficient size to permit the escape of one of a larger diameter, I should consider highly dangerous. Here, for example, is a stone which you saw me remove lately; it is an inch and a half in its shortest diameter, and to permit its extraction without dilatation a wound of more than two inches and a quarter in length would have been required. The stone in the present instance being nearly two inches in breadth as it came out, must have required a clean cut of nearly three inches; and in neither of these is there any allowance made for the thickness of the blades of the forceps, which should be always estimated in such calculations.

Observe the narrow blade with which I cut, and, when I place it in the groove of the staff, how very narrow the wound must be; the urethra is laid open, and a slight notch only is made in the left lobe of the prostate. This having been done, and the knife withdrawn, the forefinger of the left hand was pushed along towards the bladder with a degree of force sufficient to enlarge the wound by dilatation, perhaps even laceration, of some of the textures. In this instance the perineum was so deep that I could not (as is generally in our power) get the point of the finger fully into the bladder, and put it over the stone in such a manner as to draw it towards the neck of that viscus, and place it in a favourable position to be seized with the forceps. I could only touch it with the point of the finger, and could form no idea either of its exact position or size. The staff was now withdrawn, and the forceps were carried along on the back of my finger, which I was at the same time gradually withdrawing.

In such a case as this, from the uncertainty as to the exact size and shape of the stone, I could not make sure of seizing it at once with the forceps, and being unable to ascertain by the finger whether it was caught in the most favourable axis, I had to take my chance on both these points. Fortunately the stone was grasped in the second clutch with the forceps, and, as you saw when it was extracted, it had been caught most advantageously. Being conscious that the opening in the neck of the bladder was not yet of sufficient size to permit the passage of the stone, I was prepared for the necessity of further dilatation, and expected that I should accomplish this during extraction, by moving the forceps in different directions, and at the same time applying some

considerable force in drawing them towards myself. As soon as the stone was seized, and after being satisfied that I had not included any portion of the wound, or of the bladder between the blades (to make sure of which I almost invariably turn the forceps and stone once round), I began the requisite movements to bring the stone out. I soon perceived, however, that the textures were not likely to yield except on the application of a greater degree of force than I deemed myself warranted in applying. I therefore (still keeping hold of the stone, and committing the charge of the forceps to an assistant) passed a probe-pointed blade into the wound, and made a slight incision in a part which seemed to offer the greatest resistance, and could at the same time be most readily approached. Here it was the left lobe of the prostate which I touched, but had any other part seemed to require the knife I should not have hesitated to apply it on any side of the wound or prostate. Now I took the forceps again, and at once felt that the parts yielded more readily, so much so that the stone was extracted without further trouble.

A tube was introduced to permit the ready escape of urine, for as the surface of the wound was large, ragged, and deep, I thought it well to use this precaution in this instance.

There was no bleeding of consequence afterwards, and the case has gone on so favourably that I have little to say regarding the after-treatment. The tube was withdrawn on the second day, and, with the exception of a little opening medicine from time to time, he has required nothing on my part. The wound has been slow in closing, which is chiefly to be attributed to its great original size, as also to the circumstance that on the third day after the operation I tore open some of the adhesions to allow the urine to pass readily away. It is difficult in some instances to account for the tardy closure of the wound, for it certainly is not in all instances in proportion to the size of the wound. My friend Mr. Thomas Elliot, of Carlisle, has lately published a case of removal of a stone from the bladder by the operation of lithectasy (Edinb. Med. and Surg. Journal, No. 154), a proceeding similar, in some respects, to lithotomy with the apparatus major, by which the opening in the neck of the bladder is made by dilatation. Here, although the use of the knife in the deep part of the wound was so limited that a slight opening in the membranous portion of the urethra was all that was made with it, the aperture in the perineum was nearly a month in closing; while, on the other hand, it has often happened that even large wounds have entirely closed by the first intention, and that the urine has passed from the bladder by its natural course immediately after the operation.

You have now, Gentlemen, since the commencement of the session, seen me treat three cases of this kind on principles such as I am at present advocating. In the case of Edward Minister, ætat. 75, on whom I operated on the 15th of October, and extracted this stone, which is considerably above the average size, the opening in the neck of the bladder was not larger at first than to permit the entrance of the point of my finger; and, although considerable force was used in dilating and extracting, and the circumstances were otherwise not very favourable, the result was most satisfactory; the patient recovered without a bad symptom, excepting the great shock of the operation, which will happen in some individuals under any circumstances. In the boy J. Saul, ætat. 6, from whom I extracted this small stone on the 13th of the same month, similar force was used, though not to the same extent, and the patient left the house with the wound perfectly closed exactly three weeks after. This practice I have followed in other instances, which some of you may have seen in this house; and, as the results of any mode may reasonably be judged of by its success, you may be inclined to look favourably upon that which I have endeavoured to inculcate. I have seen patients die after this method as well as after free incisions. Some patients will die from the operation by whatever mode it is accomplished, yet I cannot but think that there is less danger so long as part of the prostate remains entire, than after the knife has been carried through this organ and along the tunics of the bladder.

You have had the opportunity of contrasting these operations with that of lithotrity, which you have seen occasionally practised during the same period, on a patient of the name of Mayott, whose case has already been brought under your notice in this room. You have seen how tedious, painful, and uncertain the proceeding has been in this instance. You must not suppose, however, that the operation is always so unsatisfactory, but the case is worthy of notice, as illustrating the difficulty of foreseeing the effects of the proceeding in certain individuals. When I selected this case for the application of lithotrity, I imagined that I thereby did what was best and safest for the patient. The objections to this mode of treatment seemed to me to be more than counterbalanced by the dangers of lithotomy; and, although the result has not yet equalled the practice which you have seen adopted with the knife, the patient seems still satisfied that he was not subjected to that operation, the immediate effects of which cannot be foretold even by the most skilful surgeon.

A LITTLE platinum put into boiling sulphuric acid restrains the ebullition to a great extent."—*Dr. Stokes, of Dublin.*

UNIVERSITY COLLEGE HOSPITAL.

CLINICAL REMARKS

ON

CASES IN THE HOSPITAL.

RECENTLY DELIVERED BY

ROBERT LISTON, ESQ.

IRRITABLE BLADDER SIMULATING CALCULUS.

Mr. Liston proposed, he said, to make a few remarks upon cases that had presented themselves within the last two or three weeks, and first upon that of a boy, who had been lately admitted into the hospital, labouring under some symptoms of stone. He was seven or eight years of age, made water frequently, and apparently suffered much pain in doing so. It was naturally enough thought by the gentleman under whose care this patient had been that the symptoms arose from stone, and he had, by the introduction of a catheter, which had been from time to time required, almost satisfied himself of its presence. An examination was now made, but no stone could be detected. As the sound, however, passed over the coats of the distended bladder they were found to be hardened and fasciculated, and gave a sensation to the hand as though the instrument was passing over parchment or wet leather; a very curious sort of rub, one would almost say grating sound, was experienced in withdrawing the instrument. The boy had made water in great quantity, and all about the bed and spectators, but with much straining, whilst preparations were making for introducing the sound, yet the curved part of the instrument moved freely in the viscus. It was evidently overdistended, and incapable of expelling but a limited quantity of its contents. This was proved, after a second examination with the sound, by the introduction of a catheter.

It was not unlikely, Mr. Liston stated, that the distention of the bladder might have originally arisen from the lodgment of a small concretion in the neck of the viscus, which might have escaped in the interval betwixt the examination made out of doors and in the hospital. This he was inclined to believe from what he had known to occur in other cases. He referred to one published in his "Practical Surgery," and illustrated by a sketch of a most remarkable dilatation of the bladder, with large pouch in its fundus, great enlargement of the ureters and pelves of the kidneys. This patient, a boy of very tender years, had been sent from a distance to be cut for stone, which was reported to have been felt distinctly; none, however, could be discovered upon careful and repeated soundings by Mr. Liston. The boy was in a very declining condition, and died within a few weeks of his admission into the Edinburgh Hospital. There was no stone in the bladder or in any of the passages. Retention of urine in children arises more frequently from the passage of small concretions than from any other cause. Mr. Liston in this case ordered half a drachm of the balsam of copaiba, with castor oil, every morning, for the purpose of clearing out the bowels, for the removal of any irritating matters, worms, or sordes. He also directed the house-surgeon to introduce the catheter night and morning. In a few days the symptoms were much ameliorated; the boy had regained full power over the bladder; all the symptoms abated, and he was soon discharged cured. Mr. Liston drew attention to the necessity of carefully sounding for stone and decidedly detecting its presence before proceeding to any operation whatever. Some surgeons (who ought to have known better) had cut into the bladder, some of them over and over again, when there had never been any stone in it. The only test of the presence of calculus was the unequivocal striking of the sound upon the foreign body.

TUMOUR OF THE MOUTH.—OPERATION.

Mr. Liston exhibited a tumour which he had removed from the mouth in the course of the preceding week. The growth was awkwardly situated at the posterior part of the mouth, involving the gums and teeth on one side of the lower jaw. It was of a homogeneous character, of about the structure of the gums, not very vascular, and endued with but little sensibility, covered by a prolongation of the lining membrane of the mouth, firm, and a slight noise was heard when it was under the knife. It exhibited no single character of malignancy.

The situation of this tumour rendered the operation of removal very difficult; it was situated at the further extremity, and near the ramus of the jaw, and was of considerable size. In these cases it was desirable to operate without external incisions, to avoid deforming the features, though such incisions diminished greatly the difficulty of the operation. It might generally be done by first cutting away part of the tumour, extracting any teeth connected with the growth, and cutting out a portion of the alveolar processes by means of the cross-cutting pliers. It was attempted in this instance, but it was to be feared, from the restlessness of the patient during the operation, that the complete removal of the parts involved had been frustrated, and possibly further proceedings might be necessary.

Tumours of this description were met with in various parts of the mouth; they were often connected with the body of the under jaw, sometimes affecting the gum or socket of only one tooth, sometimes of two or more. They were of various sizes, and generally projected outwards; in the present case the growth was inwards. They were sometimes

lobulated, sometimes quite smooth, and unattended by any pain or discharge. Mr. J. Bell had described a tumour situated in these parts, of a soft, spongy, and cancerous character, not at all allied to the cases under consideration, and of very uncommon occurrence. Mr. L. had been occasionally consulted in such cases, but they were more allied to malignant ulcers, with soft and spongy swelling surrounding them, than to tumours, properly speaking. In such cases removal would be useless, excepting in the very earliest stages. Epulis, the disease exhibited in the preparation, was of a benign character, as far as any disease could be called benign, and when completely removed would not be re-produced again, either in the part operated upon or in any other. It was necessary to know from whence the disease had its origin, in order for its complete removal. It was sometimes dependent upon decayed teeth, sometimes it sprung from the aveoli, and sometimes from the jaw itself. It grew from the gums, the periosteum of the socket, or the periosteum of the tooth. Mr. L. related the case of a boy who had a tumour of this kind attached to one of the bicuspides; a tooth was removed for the purpose of taking away a part of the alveolar processes to which the tumour was supposed to be connected; the tumour was found attached to the neck of the tooth, and came away with it, rendering further interference unnecessary. The case did well. All sorts of caustics had been used to destroy the tumour; it had been cut away repeatedly, but all in vain. These tumours were often large, but were generally easy of removal. It was sometimes necessary to remove the tooth and a portion of the alveolus. No further treatment was required; cicatrisation took place, and a cure was the result. Occasionally, however, operations at the back of the mouth were attended with difficulty, particularly when the disease had its origin low in the jaw, or involved its base. It might be necessary in some cases to carefully examine the jaw, and even to remove a portion of it through its entire thickness. He related the case of a boy, ten or twelve years of age, who had a large tumour of the lower jaw. In this case it was thought that possibly a portion of the jaw might require to be removed, and an incision of the cheek was accordingly made. It was found, however, that the base of the jaw was unaffected. The tumour was detached with the alveolus on each side of it, which was then cut out with pliers. The remaining portion contained the permanent teeth, the tops of which had been partly exposed in the operation. These teeth eventually came forward and became serviceable.

TUMOUR OCCUPYING THE POPLITEAL SPACE.

The subject of this case was a boy ten years of age. A tumour was noticed at the posterior part of the thigh when he was about two years of age; as this continued to increase in size, it was explored by a grooved needle, but nothing escaped. At this time there appeared to be evident fluctuation and pulsation. A variety of means were employed for its dispersion, such as blisters, the use of setons, &c., but these produced no change in it; it still increased in size, and on admission into the hospital it occupied all the popliteal space, and it felt fully as large as a goose's egg. On examination, the tumour had a soft, doughy feel, almost amounting to a sense of fluctuation. It was evidently deeply-seated under the fascia of the ham. By flexing the leg upon the thigh, so as to relax the ham-string muscles, the tumour could be lifted up, together with the other structures of the region; its borders, however, could not be distinctly defined, nor could it be isolated from the adjacent tissues. The elasticity of the tumour was such as to resemble the fluctuation of fluid, and to lead many to consider it a collection of matter—a chronic abscess. The duration of the disease, the fact of its having been explored without escape of pus, and a seton having been kept in it for some time without reducing the bulk, forbade this idea, nor did they afford better grounds for suspecting the existence of aneurism, of which the only symptom that had ever existed was a degree of pulsation in the tumour. This did not now exist, and the youthfulness of the patient rendered the existence of such disease improbable. Satisfied that it was a new and solid growth, Mr. Liston determined on removing it.

It was thought advisable to explore it in the first instance, a narrow bistoury was accordingly thrust into it, turned upon its axis, and partly withdrawn. This was followed by an uninterrupted stream of blood of a darkish hue. On attempting to move the point of the knife about in the tumour no cavity could be detected, and it was thought probable that some vein had been wounded by the puncture. When the bistoury was pushed into another part of the tumour no fluid escaped from the puncture so made. A free incision was now made over the tumour and the fascia divided; the result offered little encouragement to proceeding with the operation, for the tumour had apparently shrunk away to nothing, and appeared covered on every aspect by muscle. It was soon discovered that the growth was situated in the substance of the semi-membranosus; this muscle was accordingly cut into, and the tumour, which was imbedded in it, dissected out. It was closely connected with the popliteal nerve, which, with the large vessels of this region, was exposed during the dissection. On cutting into the tumour, which was covered by muscle and very dense fatty matter, a large and beautiful mass of erectile tissue was exposed to view,

and the hæmorrhage, the pulsation in the early stage of the disease, its gradual increase in size, and its shrinking away on being handled, were now all sufficiently explained.

Erectile tumours seemed sometimes to be composed chiefly of venous branches, and were allied to varix. In such cases they were of slow growth, and threw out, when punctured, dark-coloured blood in considerable quantity, but not impetuously. Sometimes the arterial capillaries seemed to have more to do in the formation of the disease. These tumours occasionally pulsated strongly, and were attended with a peculiar whizzing noise; when cut into, blood was poured out rapidly, and to an alarming extent. Their internal structure resembled closely, in fact could often not be distinguished, as in the present instance, from the natural erectile tissue.

It was very unusual to find erectile tissue deeply seated, and still more uncommon to find it in the substance of a muscle, and, indeed, it was very uncommon to find muscles in any way diseased. These tumours were very frequently found in subcutaneous cellular tissue, involving also the skin itself, specimens of which were to be seen in the museum of the college.

In alluding to the rarity of any pathological changes taking place in muscles, Mr. Liston related a case in which he had found it necessary to remove the sterno-cleido-mastoid muscle of one side, involved in a sarcomatous tumour,—a dissection so difficult, from the great number of important parts amongst which it was to be effected, as to make him think he should hesitate before repeating such an operation. In consequence of the long continuance of this disease the neighbouring blood-vessels were greatly enlarged; one vessel, just above the thyroid cartilage, bled so freely, and was so much retracted, that to secure it with the forceps was impossible. In this dilemma a tenaculum was passed through the thyro-hyoid membrane, underneath the vessel, some threads wound round it, and the point of the instrument then cut off and left in the wound; it effectually controlled the bleeding, and came away in the course of a few days, and all did well. Gentlemen who would be operating surgeons must be prepared for these pinches; it was not all smooth-sailing, nor could it be said when an operation was commenced what might occur in its progress, or what shifts might be necessary to go through with it successfully. Erectile tumours were generally to be removed by ligatures, the great hæmorrhage that followed wounds of them rendered the cutting of them out very dangerous. The operation of removal by ligature was often enough seen in the practice of this hospital, and was generally very successful. In the museum of the college was to be seen a very fine cast of a subcutaneous erectile tumour in the perineum which had been removed by this means; they were of very frequent occurrence, and in every part of the body. Erectile tumours very rarely or never occurred in bones. Both British and foreign pathologists were continually confounding malignant disease of the cancellated texture of bones with this affection. In the French Dictionary of Medicine, in a paper on the subject, the writer, after cautioning against this error, himself falls into the same mistake. The cancellated texture of the heads of bones was often enough the seat of malignant disease; the veins became enlarged, deposits of cancerous matter took place; the whole normal structure was destroyed. The periosteum became thickened; the end of the bone enlarged to various sizes, sometimes very large. These tumours proceeded on to ulceration; they threw out fungi, and might bleed profusely sometimes, but they were altogether another thing from erectile tumours. Mr. L. had seen a case in which a man of about forty years of age had had abscess of the lower end of the femur, from which followed exfoliations of bone; these were discharged through some ulcerations which had taken place in the ham. After their discharge the ulcers cicatrised and all appeared to be doing well. Sometime after a small fungus protruded in the situation of the cicatrix, and bled rather freely; for some time the hæmorrhage was easily arrested by bandages; however, it continued to increase, and on one occasion had bled so profusely that it was found necessary to apply a tourniquet, and then a second. All was in vain, and the patient was nearly moribund from loss of blood; in these circumstances nothing remained but to amputate the limb, which was accordingly done, and the issue was successful. On examining the end of the femur the cancellated texture was found dilated, full of cells containing a bloody lardaceous matter, with enlarged veins, &c.; at the back of the femur was an opening through which protruded a small fungus, that which, presenting through the integuments, had given rise to the alarming hæmorrhage.

MALIGNANT TUMOUR OF THE HIP.

Mr. Liston then exhibited an immense malignant tumour which he had recently obtained at the post-mortem examination of a patient. It was connected with the os ilium, from which it had grown, projecting into the pelvis, where it was covered by the iliacus muscle, and outwardly over the dorsum of the ilium. The subject of it was a gentleman of about sixty; it had been growing some years, had increased very rapidly, and was attributed to a blow received by a fall on the hip. Many surgeons had seen the case, and several had considered the disease aneurismal, from the fact that during its progress pulsation had

existed in it, and a bruit had been heard. These were of frequent occurrence in such tumours, and were to be accounted for by the increased size of the vessels going to or contained in the diseased tissue. Some of these cases had been treated as aneurism. Mr. L. related one in which the common iliac artery had been tied; so far as the operation was concerned, the patient did well. The tumour, however, did not decrease much, and ultimately the patient perished; and examination after death showed what the true state of the case had been.

CASE OF DISEASED KNEE-JOINT.

Mr. Liston then made some remarks on a case of diseased knee-joint, for which amputation of the thigh had recently been performed. Showing a cast of the diseased joint, he stated that the subject of the operation was a little girl, who had been suffering for some years from the disease. The cast exhibited great mischief in the joint, the cavity of which was full of pus; the ligamentous tissue was nearly destroyed; the synovial membrane in a soft pulpy condition, the articulating surfaces of the bones deprived of cartilage by ulceration; a large cavity filled with pus in the head of the tibia, with other abscesses of the soft parts. These cases were attended with great impairment of the health; patients became hectic, lost flesh, and suffered from great pain, fever, night-sweats, and diarrhœa. Such had been the patient's condition in the present instance, and the only chance of benefit offered was the removal of the disease by amputation. This was generally followed by immediate improvement of the health, as in the present instance, and life was thereby prolonged with a very fair recovery of health for many years, and not unfrequently there was no return of the disease at all; in other cases the result was not so favourable. In some few of these cases recovery took place without operation; the disease gradually subsided where the constitution bore up against its effects, and the parts being kept in perfect rest, and other means used to keep the general health good, anchylosis took place between the articulating extremities of the bones; but even when this occurred, the joint, of course, remained stiff and immoveable.

STRANGULATED HERNIA.—OPERATION.—DEATH.

Another interesting case had recently occurred, but with unfavourable result. A man, about forty years of age, had been operated on for strangulated inguinal hernia a few days before. Hernia had existed for twenty years, but had always been reducible. The patient had worn a truss, but having recently broken it, had been using another which was old, and did not completely keep back the bowel. In consequence, during some exertion, it had come down, and every means had been resorted to in vain to return it, both before and after his admission into the hospital. There was little tenderness of the tumour, and the only bad symptom was vomiting of stercoraceous matter. The strangulation had existed about forty hours. The operation of cutting down on the bowel and returning, it was had recourse to, and effected without difficulty, and for four and twenty hours the patient had gone on without an unfavourable symptom. A great deal of flatus had been expelled from the bowels, which had also been relieved by stool once; no medicine had been given. Suddenly a violent diarrhœa came on, which could not be arrested. The patient was much debilitated by it, and whilst sitting up in his bed suddenly fell back and expired. An intermission in the pulse had been noticed on his admission into the hospital, and had been observed at different times before by his medical attendant. An examination of the body was made after death, when nothing could be discovered to account for it. There was scarcely a trace of peritoneal inflammation; the part of the bowel which had been strangulated was but little injured; in the heart nothing abnormal was discovered, but a slight dilatation of the left ventricle; the lungs were pretty thickly studded with tubercles, and contained also some cavities. Indications of the existence of tubercular phthisis had been observed for some years, but neither could the state of the lungs, the heart, or the bowels, account for the sudden and unlooked for fatal termination of the case.

ASPHYXIA.—THE FORAMEN OVALE.—At the meeting of the Westminster Medical Society, on Dec. 17th last, Mr. Snow detailed three cases of partial asphyxia in newborn infants and young children, who got over the first shock of the condition, but eventually perished without any obvious cause. In the only instance he had examined after death, the signs presented were precisely similar to those observed in an adult, although the foramen ovale was still patent. The patient in that case was newly-born, the case was a footling one, and the head was detained only a minute in the passage. The child recovered from the first effects of the asphyxia, but perished in a few hours afterwards, without any obvious cause. On the same occasion Mr. H. J. Johnson related the case of a woman who was admitted into St. George's Hospital with intractable ulceration of the leg. Her complexion was remarkably dingy, but not at all cerulean. She died of erysipelas. On examination of the body the foramen ovale was found so patent that two fingers could be passed from one auricle to the other. The heart was large, flabby, and somewhat dilated. He thought an open condition of the foramen ovale of no serious consequence, unless accompanied by some malformation. In this case there was no symptom of its being open,

CHARING-CROSS HOSPITAL.

SEVERE PAINS IN THE HEAD FOLLOWING AMENORRHŒA.

Eliza Price, a domestic servant, aged 18, of middle stature, dark hair, grey eyes, and dull, white complexion, admitted under Dr. Chowne, July 22, 1842, suffering from unusually severe headach, accompanied by acute rheumatism, which she attributed to taking cold; had also amenorrhœa, of five months' duration. Commenced being subject to catamenia at about sixteen years of age, and the uterine functions were normally performed in all respects until about five months prior to July 22. The rheumatism was severe, and accompanied by the usual swelling of the joints, with heat, redness, stiffness, and extreme pain; a febrile state, attended by the usual peculiar sour-smelling perspiration, which, although profuse, was not critical, and brought no relief of the suffering with it, a peculiarity worthy of notice, as being common in acute rheumatism, and uncommon in febrile attacks generally. The pulse was full and soft; the tongue whitish, and not dry. Stated that she had for some time prior to the attack been subject to indigestion, and a somewhat confined state of the body, with uneasiness at the pit of the stomach, as if the stomach was disordered. Spirits also rather depressed, without adequate cause that she knew of.

An active dose of the chloride of mercury was prescribed to be taken at bed-time, followed by a purgative draught in the morning, and repeated every four hours, until fully effectual. She had also the febrifuge medicine, an ounce and a half, with half a drachm of the wine of colchicum, every four hours. A lotion, not quite cold, was applied to the head, but without diminishing the pain. A blister was in consequence prescribed for the back of the neck.

In his clinical remarks upon this case, Dr. Chowne stated that the calomel and aperients were beneficial. Accumulations had taken place within the bowels, and the secretion of the liver was not in a healthy state; these are points which should never be lost sight of. It might not seem obvious to you that there could be any connection between a disordered state of the stomach, or of the bowels, and rheumatism; but if you keep your attention upon the subject you will often perceive that such state of the stomach and bowels gives a strong predisposition to rheumatic attacks, the violence of the attack in the limbs fluctuating with the variations of the state within.

The plan of treatment, so far as concerned the chloride of mercury, was continued; it was repeated on alternate nights. The febrifuge mixture, with wine of colchicum, was continued daily, the colchicum having an aperient effect. Under this treatment the alvine secretions improved, the action of the bowels became more free; at the same time the severity of the rheumatic attack diminished. It may be difficult to say whether the purgative medicine or the febrifuge with colchicum conduced most to the amendment, but our chief end is answered in knowing that they have together removed the patient's sufferings, at least from the rheumatism; it may be recollected with regard to the colchicum, however, that it seldom is effective as a remedy for rheumatism until it has had a purgative effect.

After the rheumatism had subsided the stomach continued irritable, and everything was rejected; to allay this state a mixture of sulphate of magnesia, in half-drachm doses, with carbonate of magnesia, was prescribed, after which the sickness discontinued. There still remained the excruciating pain in the head and the amenorrhœa; the biliary secretion was still defective, and the bowels prone to be costive. A blister was ordered for the back of the neck. *Blue pill*, three grains, every alternate night, and *compound decoction of aloes*, one ounce and a half, three times a-day. The medicines, both the alterative and the aperient, had their desired effect; the pain in the head continued intense; it was constant day and night, and was described as affecting nearly the whole of the head. It produced occasional delirium, sometimes an approach to deliquium animi, from its severity, but no ocular delusion or other defect of vision. It did not produce strong febrile excitement nor intolerance of light; nevertheless, this kind of pain within the head can never be seen without anxiety, and is not unfrequently, even when no symptoms are present of a more formidable kind than those we have witnessed in this patient, a forerunner of an epileptic or of an apoplectic attack. There were sometimes sensations of throbbing within the head, and the temporal arteries beat with somewhat more than usual force; the throbbing and increased action were most perceptible when the patient was lying down. In the hope of diminishing these six ounces of blood were taken from the back of the neck by cupping, but without giving any relief; the head was then shaved and a blister applied. At this time there was an unfortunate return of sickness. A mixture was ordered, consisting of creosote and camphor-julep, with good results. The blister had drawn well, but the pain in the head not being improved it was renewed; a second, also, drew well, but made no favourable impression on the pain. Up to this period the only benefits obtained were an improved state of the functions of the alimentary canal, and the departure of the rheumatism, and we had still to cope with the amenorrhœa and with the headach, still intense in a degree which it was distressing to witness. The sickness being

diminished the decoctum aloes compositum was again had recourse to, with the use of a hip-bath every alternate night. This was continued about a week, and was followed by a slight return of catamenia. Hitherto her diet had been restricted to broth, but as her strength seemed to require an addition, an egg daily was ordered, and she seemed in all respects better, the head still excepted. The decoctum aloes compositum still acting satisfactorily on the bowels, it was continued. A seton was next established in the back of the neck; it had been introduced a fortnight, apparently without effect, but since that time there has been a gradual amendment. Her diet has been changed, and she has now meat every other day.

We have had in this young woman an example of severe headach setting in with an attack of rheumatism, and most probably having its origin and cause in that state of the system which gave the predisposition to rheumatism, yet remaining after that state of the system had been corrected, a tenacity not unfrequently seen, and of which we may perceive a striking illustration in the continuance of intermittent fever long after the patient has removed out of the miasmatous situations where the seeds of the disease were sown. The seton was introduced in this case as a counter-irritant more influential than blisters, both in the degree of irritation set up, and in the constancy with which it is continued. Dr. Chowne had so often seen this mode of cure successful where the patients would submit, for a proper length of time, to the inconvenience of them, that he did not despair of success so long as the plan remained untried.

CASE OF

GLANDERS IN THE HUMAN SUBJECT.

The following case, in which the successive march of this disease is so well indicated that we shall present it to our readers with little abridgment, occurred in a stable-servant, thirty-six years of age, and of a constitution not naturally strong, though he had habitually enjoyed good health. He had never been the subject of any serious disease beyond those usually supervening during infancy and youth; nor had he ever suffered from scorbutic or impetiginous affections, enlarged glands, a tendency to the formation of abscesses, or other manifestations of a scrofulous or cachectic state of the system. His parents had died of diseases quite dissimilar to that by which he was now attacked. He was employed in a posting-house near Paris, where twenty-six horses were kept, eight of which were glandered. It was these last, in fact, that he was specially employed to look after, and he was expected to groom them carefully every day, that their diseased condition might be concealed as much as possible. The stable in which these horses were kept did not seem to be unhealthy, yet it was observed that, though young and strong at first, the horses lodged there soon became diseased; and the adjoining apartment, where the man slept, was decidedly unwholesome, his bed being placed against a damp wall. Of the premonitory symptoms of his affection the subject of the case we relate could give no detailed account; but the proximate impetus to its development appeared to be a kick he received in his armpit. The evening ensuing he felt such sharp pains in that region that he applied for advice to a surgeon, who bled him, and applied some leeches over the seat of pain. Next day he felt better, and resumed his work, but on the following day his prostration was so great that he was unable to get up, and though no fever was obvious he had lost his appetite, and felt great inclination to vomit. He remained in bed. In a day or two a slight coryza came on, causing him to *sniff up* frequently the contents of his nose, which he discharged through his mouth. He felt discomfort and pain in the pharynx, except while swallowing, but no pain in the head. His treatment at this time was confined to a little ordinary nursing, with warm water to the feet occasionally. After one of these baths, during which the feet had remained in the water for half an hour, he felt violent pains in both the legs and arms; and on the second day afterwards his legs presented an abundance of tumours, which rapidly increased in size. As soon as these local symptoms appeared the general symptoms before mentioned ceased altogether.

On the 18th of August, 1841, the patient was admitted into the Hôtel Dieu. His symptoms were these,—general wasted appearance and prostration; little fever, or heat of surface; low pulse, beating 70 per minute; skin moist; appetite tolerable; tongue rather injected; little headach; sleep undisturbed; pharynx, velum, and pendulum palati inflamed, and the last named tumefied; the anterior border of the velum covered with whitish spots (*plaques*). The patient was continually *sniffing up*, but discharged nothing by the nose; he had spit but once, and the rejected matter appeared to be saliva only; anterior portion of the nasal passages dry; excretion normal and regular; fluctuating tumours on the under part of the left thigh as large as a hen's egg; two on the inner side of the right thigh, two on the left, and two on the right calf, which last region appeared to abound with purulent matter; and under the right pectoralis major muscle an abscess of large extent. All these abscesses were painful on being touched, and over some the surface was reddened; no pain on pressure of the abdomen; no cough, nor abnormal sounds from

the chest on percussion, &c.; feet œdematous, and movement nearly impossible. Ordered light wine and lemonade, friction with mercurial ointment; and pulv. ipec. comp., ten grains, in two doses, daily.

On the morning of the 20th abundant general perspiration, but the tendency to *sniffing up* (*reniflement*) continues, as well as the pains in the limbs; somerestlessness, but pulse diminished to 76, from 80 per minute, as during two days previously. Other symptoms much the same; urine heightened in colour, but no deposit or diminution of normal acidity; no precipitate (*residu*) on the application of heat, and very little when treated with nitric acid, though much turbidity on treatment with oxalate of ammonia. In the evening the skin was dry, hot, and very sensitive to cold currents of air.

On the 21st, perspiration copious; pulse 80, but not so full as on the night previous; a liquid stool passed in the night, and a new abscess formed without the patient being aware of it; prostration greater, but no cough or headach; little fever; sniffing less frequent, and perfect integrity of the intellectual faculties. Caustic potass was applied to procure the opening of one abscess on the thigh, and another on the arm. At night the patient appeared better.

On the 22nd, the abdomen slightly tumefied; pulse 84; urine reddened and perceptibly acid; other symptoms little different from those of the day preceding; the tongue is, however, more dry and red. The same medicine continued as at first prescribed.

23. Pulse 70; right ankle-joint swollen, tender, and painful on touch; a new abscess on the back part of the left forearm. On auscultation a mucous rattle heard on the right side of the chest, posteriorly, and percussion gives a somewhat dull sound at the level of the infra-spinous fossa.

The chest symptoms augmented, and other abscesses successively appeared between this period and the 28th; loose stools had continued, and the patient had become much more feeble and emaciated. Pulse 88; skin hot; the abscess on the forearm much increased in size, and rather painful. Mercurial frictions suspended. Several abscesses were opened, and in all nearly a pint of thick, greyish, purulent matter, slightly coloured with blood, was removed. The patient felt relieved, and his pulse sank to 85. On the morning of the 29th he seemed a little better, and the emptied abscesses showed a disposition to heal. Others were accordingly opened by means of caustic, and nearly a similar quantity of matter taken away as on the day preceding. The alleviation, however, was transient, the sweating, looseness, and pain in the limbs increased, the sleep and appetite diminished, and the prostration continued, though wine and nourishment were plentifully administered. On the 31st more abscesses appeared, with headach, and purulent urine, which became ammoniacal in less than two hours.

Sept. 1. An abscess in the calf of the leg was opened, and the pus preserved for experiment.

2. The abscess first opened suppurated afresh, and exhibited a disposition to keep open, though the rest had mostly cicatrised. Many sudamina appeared round the neck; the right lung gave all the signs of engorgement. Intense cephalalgia; sensible diminution of urine.

3. The urine, which was orange-coloured, transparent, and alkaline, but with little smell, was tested. It gave no precipitate on the addition of nitric acid. On application of heat much albumen was deposited. Treated with oxalate of ammonia, a large quantity of salts of lime was thrown down, with only a little uric acid. By exsiccation a good deal of animal matter was procured.

On the 7th an eschar as large as a crown-piece had been produced on the sacrum, but no new abscesses had latterly formed, and those previously opened had healed, leaving now only a few remaining on the right side of the thorax and in the right leg. But on the other hand auscultation proved the respiration of the left lung to be greatly diminished, and mucous rattle was heard at both its base and summit.

On the 8th the patient was moved to another ward, which process caused him much suffering. A new and painful abscess appeared, and those which had healed now mostly suppurated afresh. Dryness and heat of surface, loss of appetite, cough, great dejection, and anxiety, &c. Solid food substituted by soups, broths, &c. The feebleness of the patient continued to increase, and on the 10th four ounces of decoction of cinchona daily, were ordered.

11. The left arm is one collection of abscesses, of all sizes, up to a hen's egg. A shivering fit occurred, lasting for twenty minutes, and succeeded by sweats and headach. Sleep broken, delirium, violent cough, much diarrhœa, total loss of appetite; sensation in the throat obliging the patient to make efforts of deglutition almost perpetually; respiration and speech very difficult. Great flaccidity of the muscles, and motion of the limbs nearly impossible.

In this state the patient remained for several days longer. Several of the abscesses were opened, and a greyish inodorous pus, mixed with blood, was drawn therefrom. On the 14th there was a perceptible increase of dulness on percussion in both lungs, and a rattle was heard throughout their whole extent, though the right appeared to be less engorged than the left lung. The abscesses (in the thighs particularly) continued to discharge pus, and the patient gradually sank. Alternate shivering and sweating access; anxiety and dyspnœa increased from the 15th to the 20th. At the last date the pulse

was at 120, and very feeble, but the temperature of the surface had much lowered, and the cough was less frequent than previously; legs, and particularly the tibio-tarsal articulations, much swollen. The right leg seemed to be involved in a fluctuating abscess from the belly of the gastrocnemii to the ankle-joint. "Cette jambe resembles à une pyramide à base inferieure!" The abscess in the right thigh gave issue to a greenish-yellow pus, and the edges of the ulcer through which it flowed were very painful though not apparently inflamed. The abscess which formerly had existed near the right pectoralis major had now altogether disappeared, being replaced by a more hardened but still mobile mass, painful on pressure. In the evening of the 20th the pulse was scarcely perceptible, but beat 146 times, while the number of inspirations was 32 per minute. The patient suffered so much from pain in the limbs, &c., that he often uttered loud cries; yet he lingered on till the 24th, when death closed the scene.

Autopsy Twenty-two Hours after Death.

The subcutaneous and intermuscular tissue, and even many of the muscles themselves, were infiltrated with purulent matter in all directions. Voluminous abscesses were found in the biceps and triceps muscles of the right arm, and many in the axilla, communicating with each other, and with the cavity of the pleura, by three separate openings, through the sixth intercostal space. Two of these openings were of the diameter of a large pea; the third and most external was nearly as large as a shilling. The muscles all round were softened, and looked in parts as if torn through (*dechiquetés*). In the right axilla there was also extensive serous infiltration; and beneath the great pectoral muscle a grumous mass was seen, composed partly of coagulum and partly of the concrete remains of pus, the liquid portion of which had been absorbed. The axillary lymphatic glands of the left side were much enlarged. The muscular structure of both the biceps humeri in the right, and the flexor profundus in the left arm was destroyed, and these museles converted into mere purulent sacs. The lower extremities exhibited analogous appearances to the upper, being full of abscesses, &c. Serous infiltration prevailed in the cellular tissue, around the right tibio-tarsal articulation, but none of the joints presented any internal alteration, nor were the inguinal glands affected (?)

The lymphatic glands in the neck were, on the contrary, red, softened, and slightly augmented in size. The mucous membrane over the epiglottis was a little injected. In the pericardium was some serum, mixed with a little blood. Very little blood remained within the heart, the natural size and structure of which was unchanged. Old adherences with the lungs existed on both sides of the chest, and in the left pleura some thick false membranes and serous effusion were visible, the products of recent pleuritis. Some emphysema existed in the left lung, and a slight engorgement at the base of both lungs, but in neither was there any abscess. The liver was much congested, enlarged, injected, and somewhat softened; the spleen a little enlarged, softened, and readily torn. The kidneys presented no sign of disease.

The nasal passages were the seats of minute observation. The anterior portion of the pituitary membrane appeared healthy, and on the floor and sides of the nose it was rather inflamed but not thickened. The redness was greater over the turbinated bones than in the middle and lower meatus; but these passages were covered with a thick and viscous mucus. Towards its posterior part the pituitary membrane became gradually more injected, thickened, and softened; and in one place it was so completely ulcerated as to be converted into a white viscous layer, similar in appearance to casein, and which was readily scraped from the bone with the back of a scalpel. The inflammation, softening, prevalence of the peculiar mucus, &c., extended more or less into the sphenoidal, maxillary, and frontal sinuses, the ethmoid cells, &c.; and many further details are given in the original report, to which, owing to want of space, we must refer the reader.—(*Gazette des Hôpitaux*, Dec. 31, 1842.)

Inoculation.—On the 29th of August, during the progress of the foregoing case, a bitch was inoculated with some of the pus produced, within an hour after it had been drawn from the abscess in the right axilla of the patient. The matter was introduced into several punctures made with a lancet in the nasal passages, and various parts of the skin of the animal, and a quantity of it was injected up the vagina. It had failed, however, by the 11th of September to produce any morbid effect, a circumstance which adds a proof to the allegation that of all animals the dog is the least disposed to contract disease by contagion or infection.

Two old but previously healthy horses were, however, inoculated on 1st of Sept., one with pus found in the urine of the patient, the other with matter from an abscess. Five days afterwards the second horse presented pustules with hardened and inflamed edges in the nasal membrane; and by the 11th of September all the symptoms of farcy manifested themselves in the animal, which died in about two months. The first horse remained unaffected.

Two other horses were inoculated, one with pus from the patient, and the other with matter from a small-pox pustule. The latter horse remained unaffected; the former

sank under symptoms of acute glanders, which had been preceded by others of the chronic form of the disease.

In most, if not all, other recorded cases of glanders in the human subject, the disease has presented itself in an acute, not in a chronic form, as in the case above narrated. Several of the appearances remarked in horses suffering under chronic farcy, as pustules on the skin and mucous membrane, &c., were not among those exhibited by this patient; but the presence of the peculiar viscid mucus and the condition of the pituitary membrane in the nasal passages are pathognomonic symptoms, which, even in the absence of experiment, could leave no doubt as to the nature of the complaint. The notices of the medical treatment of the above case are meagre to the last degree; and we are almost led to believe that but little effort was made to attack the disease, or alleviate the sufferings of the patient, by medicine. Whether active medical treatment in this case would have effected any permanent good may, indeed, be very doubtful. But if a morbid condition of this kind and extent cannot be *cured*, it might in most cases be *prevented* from infesting mankind, if it were made compulsory, as it ought to be, to destroy glandered horses as soon as they are found to be irremediably possessed of the disease. But it is not until a medical reform to some extent has been carried out in this country that we can reasonably hope to see a watchfulness to ensure the preservation of the public health exhibited in this and similar measures.

CURE OF GLANDERS IN MAN.

A WAGONER, nineteen years of age, entered the Hôpital de la Charité, in Paris, on the 18th of October, 1841. He complained of having felt ill for the week preceding, without being able to specify any particular seat of disease. Soon intense pains were felt in the ankle and knee-joints, and the muscles of the leg and thigh, though unattended with swelling or redness. His pulse became quick, thirst intense; headach and prostration. On the 25th of October pustules, filled with a purulent matter appeared on the instep and upper surface of the three smaller toes of the left foot. These pustules broke, and cicatrisation was completed in a few days; but a diffused swelling now made its appearance in the anterior part of the superior third of the thigh, followed by two similar tumours, one on each leg. M. Mouneret, under whose care the patient was placed, now suspected the nature of the disease, and ascertained that one of the horses kept in the stable where the patient had been sleeping actually had the glanders. For the eight months ensuing tumours of a similar kind to the foregoing were successively and incessantly appearing on all parts of the upper and lower extremities, though they continued one after another to disperse, and nothing in the general condition of the patient, except his emaciation, gave cause for alarm; yet one curious collateral circumstance is stated. Early in December, 1841, a horse being inoculated with the matter from one of the abscesses, died in the course of five days, without, however, presenting during life any of the ordinary symptoms, or after death any of the usual morbid appearances belonging to the disease.

The treatment of the patient was the same nearly throughout, consisting chiefly of decoction and extract of cinchona in large doses, with wine.

On the 5th of July, 1842, iodine with iodide of potassium was administered. This was followed by an attack of erysipelas in the left arm, and the iodine was suspended, to be resumed on the 17th. No new tumours had appeared during the previous two months; the cicatrisation of those still existing was soon afterwards completed, and the patient was discharged perfectly cured on the 31st of July.

Andral, and other able pathologists who saw this case, were unanimous in pronouncing it a true instance of glanders. The journal from which we have extracted the above relation says,—"The case is unique. In all the instances of glanders in the human subject reported hitherto the disease has proved fatal."—*Gazette des Hôpitaux.*

ON IODINE FOR RHEUMATISM.

DR. AUBRUN, of Paris, attributes the ill effects on the stomach, &c., that are sometimes perceived after the administration of this medicine, to the pure iodine only, and not to the solution of iodide of potassium, to which it is commonly added in practice by the French physicians. He says that, having frequently employed the iodide of potassium by itself, in doses amounting to from fifteen grains to one drachm and a half in the twenty-four hours, he has never observed any other untoward symptoms to result than a slight salivation, with a redness and heat in the throat; and in one or two instances an incipient inflammation of the conjunctiva, with coryza, which disappeared within two days from the cessation of the iodide. Dr. Aubrun has employed this salt in five cases of chronic rheumatism of the lower extremities; in three of which the pains totally vanished, after a continuance in its use during from fifteen to twenty-five days. In four cases of acute rheumatism, which he details in the "Gazette Medicale," December 10th, ult., the benefit of the iodide is still more strongly marked, it having produced an alleviation of the pain and a tendency towards cure after venesection and opium had wholly failed. Still, in plethoric subjects, it is found desirable to precede the use of the iodide of potassium by one or two copious bleedings.

VARIOLA AND VARIOLA VACCINA.

To the Editor.—Sir: In THE LANCET, page 647, you published some cases of variola and variola vaccina, related at the Westminster Medical Society by Mr. Brooke. The subject being one of great public interest, and especially to the medical profession, I beg to offer you the following cases for publication:—

In the beginning of January of this year I was requested to visit Thomas Lee, whom I found suffering from confluent small-pox, at the eighth day of the eruption. He had never been vaccinated, neither had his wife and two children. Three days afterwards I obtained some virus and vaccinated them. On calling three days after the operations, they were all in bed, feeling very sick. On inspecting the arms, I found the wife and youngest child with the punctures quite red, the other a complete failure. Two days after this the woman was sitting up well and cheerful, nursing the youngest child, which was doing equally well, the woman not having more than ten small-pocks upon her, and the child about twenty, with the vaccine vesicles much in advance. The other child I found in bed, loaded with confluent small-pox of the worst kind. The child and its father are now slowly recovering.

In another case a child, under the same roof, suffered in much the same manner as the two above mentioned, but had a greater number of small-pox pustules, the illness being equally slight.

Some few years ago, when an assistant, I met with some similar cases. A tramping family brought small-pox into the village (Lemtwardine), and one of a family of four children sickened and had the disease in the worst form. I vaccinated the other three, all of whom had it, but were never confined, even to the house, the illness being so slight and the pustules so very few. I remain, Sir, your obedient servant,

J. P. WILDING.

Montgomery, Feb. 9, 1843.

ABSTRACT OF REMARKS ON THE USE OF THE SPLEEN,

BY MR. JACKSON, IN ANSWER TO MR. STEVENS.

MR. JACKSON, in a letter to the Editor of THE LANCET, dated the 5th instant, states, in reply to Mr. Stevens's remarks last week (page 681),—"That the first objection he made to Mr. Stevens's theory was against his assertion that the spleen consists of a mere congeries of *capillary* vessels; and that the reason he assigned for that objection was that the radicles of the splenic vein are very large and highly distensible, which capillaries are not." He further states his belief that all anatomists (Mr. Stevens excepted) agree in bearing testimony to the remarkable magnitude of the venous radicles of the spleen, and that it is owing to this peculiarity that the terms, *cellular*, *spongy*, and *cavernous*, have been employed to designate the structure of that organ. He, therefore, submits that the term *capillary*, as applied to them, is inappropriate. Mr. Jackson (in THE LANCET for Jan. 28th, page 654) objected to Mr. Stevens's opinion that the capsule of the spleen is a prolongation from the aponeurotic tissue of the diaphragm, by arguing that "the capsule of the spleen *is elastic*, and that aponeuroses, or tendinous expansions, *are not*." The subsequent reply by Mr. Stevens (page 682) that the fibrous tunic is very thick at the root of the spleen, passing directly into the aponeurotic tissue of the diaphragm as a strong supporting ligament, and that this is plain in the sheep and the ass,—Mr. Jackson says is no answer to his objection, and he appeals to the Editor and readers of THE LANCET to determine if any one "can gain from it whether Mr. Stevens means to admit that the splenic capsule *is* elastic or not." Mr. Jackson considers that if the use of the spleen were simply the avoidance of an *arterio-venous anastomosis*, no elastic capsule would be required for it, and the organ need not vary in size, as it is known to do at different times. As to the assertion of Mr. Stevens (page 682) that it is not in the power of Mr. Jackson to show an injected placenta proving any proper communication between the umbilical arteries and the radicles of the umbilical vein, Mr. Jackson admits its truth, but says, "nevertheless, there is abundant evidence that such proper communication exists! It is well known that fluids injected into the umbilical arteries towards the placenta pass, not as Mr. Stevens imagines, into the *uterine* veins, but into the umbilical vein;" and he refers to a paper by Mr. Dalrymple in the last number of the "Medico-Chirurgical Review," in which the communication in question is *delineated*. To the question by Mr. Stevens (page 682) as to what quadrupeds Mr. Jackson has examined, the latter gentleman replies, "I have accurately weighed the livers and spleens of herbivorous, carnivorous, and omnivorous animals, and in none, though it is largest in the *omnivora*, is it half so large in relation to the liver as it is in man. I admit that the spleen is larger in lean than in fat persons, and in women than in men; but *that* does not interfere with the *law* which Mr. Stevens is so reluctant to acknowledge" (viz., that by which the spleen is relatively so much larger in man than in animals).

*** The above comprise the main points of Mr. Jackson's last communication. Want of space prevents our publishing this entire; but any statement therein bearing on the leading argument which may not have been

mentioned shall receive notice, together with *all other communications* respecting the spleen remaining unpublished in our hands, in a *general resumé* of the subject now in course of preparation.

ANIMADVERSIONS
ON THE DOCTRINE OF THE METASTASIS OF RHEUMATISM, GOUT, RHEUMATIC GOUT, &c.

By Thomas Moore, M.D.

We find that a decided predisposition prevails in some constitutions to a simultaneous attack of inflammation of two or more serous structures. Inflammation may originate in the serous membranes of the thoracic, abdominal, or cranial cavities coetaneously, or it may manifest itself in those localities and in the several joints consecutively, without the slightest foundation being afforded us for considering the attack of any one to have been dependent on that of the rest, in consequence of a metastasis, transfer, or revulsion of the inflammatory action from the serous membrane of one cavity to that of another.

In constitutions predisposed thereto, inflammation of the fibro-serous membrane has frequently become manifest; first, in the right or left side of the chest, and in an inconceivably short space of time, almost every serous and fibro-serous membrane in the visceral cavities and joints has become so seriously involved in the disease that the life of the patient has been endangered. Conversely, the symptoms and signs of inflammation of the serous and fibro-serous membranes have originated in the joints of the superior or inferior extremities; and, subsequently, the thoracic or abdominal cavities have been attacked by acute inflammation.

I set out by asserting, without hesitation, though not without mature deliberation, that the doctrine of metastasis, whether of gout, rheumatism, or any other form of disease, has occasioned much confusion, set up many obstacles to our arriving at an accurate knowledge of these diseases, and tended to mislead us in our modes of treatment. This doctrine, the principles of which are those of a transfer of the diversified forms of inflammatory action from one part of the system to another, is not sanctioned, nay, is rather repudiated, by the results of pathological investigation, as well as by facts elicited in our examinations at the patient's bedside. When we pay a due attention to the commencement of the symptoms of inflammation in two or more serous cavities, and observe that they progress in all *pari passu*, that their duration is coequal, and their subsidence coetaneous, we are compelled to deny the possibility of the disease in one serous cavity having had its origin in, or being in the most remote degree dependent upon, a transfer from another of the inflammatory action at its maximum of intensity. And in considering diseases in two places exempt from that dependence on each other which a metastasis implies, and in attributing them to a contemporaneous inflammation of the serous membranes, an explanation much less objectionable is offered, and one more consistent with the results of clinical observation, as confirmed by pathological anatomy.

If the advocates of the doctrine of metastasis fail in establishing that in those forms of disease which have received the names of metastatic rheumatism, metastatic gout, rheumatic gout, &c., a sudden diminution of morbid action occurs in the joints upon the supervention of the symptoms of inflammation in the serous membranes of the thoracic and abdominal cavities; or that this diminution of inflammation in the joints be commensurate with the amount of inflammatory action secondarily developed; or, if the converse of this proposition be not established, namely, as to the equal amount of reflex metastatic action from the cavities to the joints; —if the advocates for metastasis do not succeed in proving this satisfactorily, we may assert with confidence that the truth of the doctrine is legitimately to be doubted, and that the foundation upon which the fabric has been reared being unstable, it must eventually totter to the ground.

To many of my professional brethren, I doubt not, my notions will appear strange. To a few they may seem to be, in a certain degree, just; while by the majority they may, perhaps, be pronounced an unwarrantable innovation, calling into question the authority of the most celebrated and accurate observers of nature. I claim not the slightest credit for myself should the views I advance prove original; for they might have suggested themselves to the minds of many industrious and reflecting medical men. To the study of this subject my attention was first directed by the collection of a number of observations made in the wards of the General Military Hospital, Phœnix-park, at the time of my residence in that establishment.

During the winter of 1840-41, many of the privates and non-commissioned officers of the regiments then stationed in garrison, were sent to this hospital, suffering under different forms of fever. In the majority of these instances it was observed that a decided predisposition to inflammation of the serous membranes existed, so that when admitted into the hospital it frequently happened that the symptoms of acute inflammation of the pleura were present, uncomplicated with any other form of disease. At our next examination auscultation rendered unequivocal the existence of intense inflammation of the pericardium; on the third or

fourth day our attention has been arrested by the altered appearance of the patient; by his aggravated sufferings, his urgent complaints of excruciating pains in one or more joints, the knee, the ankle, or the wrist. The temperature of the limb has been found elevated; the surface of the skin glossy and marbled from the prominent distention of the minute ramifications of the venous trunks, but free from inflammatory redness; the puffiness and tumefaction of the joint have been considerable, with exquisite tenderness on pressure, and sensibility to touch; all which symptoms have been pronounced by experienced regimental surgeons to be the results of acute metastatic rheumatism. Thus, the case has presented new features; the attention of the patient (and the practitioner also), diverted from the thoracic disease, has been directed altogether to the recently attacked joint, in which all the sufferings of the patient were concentrated, and to which every symptom foreboding an unhappy termination to the case has been referred.

The practitioner who is acquainted with the nature and symptoms of rheumatism, and whose mind is sufficiently alive to the importance of a correct diagnosis, soon recognises the form of disease which has been designated acute metastatic rheumatism. He makes a close examination of the serous cavities, and the pre-existence, or, at least, the coexistence of acute inflammation of the pleura, pericardium, or peritoneum is detected. The new disease in the joint is at once attributed to a metastatic rheumatic diathesis in the patient. But, if this prefatory examination be not instituted prior to an antiphlogistic plan of treatment being adopted, in twenty-four or forty-eight hours the pain and tension of the joint are removed, the tumefaction, in a great measure, subsides, the sufferings of the patient are relieved, and the disease is often considered to be subdued. There remains merely a stiffness in the joint, with some puffiness, and occasional lancinating pains. The patient's attention is no longer rivetted on the joint, as the main source of his sufferings, and a calm and composed state may ensue, which is, however, but the harbinger of a storm. For at his next visit the medical attendant is terrified by a catalogue of complaints, which too clearly evince the continuance of an intensely inflamed condition of the fibro-serous membranes of the thorax or abdomen, perhaps of both. He now deplores the hour in which he had the temerity, by his treatment, to drive the rheumatism from the extremities to organs of vital importance in the economy, and thus to have become accessory to the fatal termination of the case, by accelerating the transfer of a disease originally metastatic in its nature.

Let us reflect for a moment upon the successive inflammatory attacks of the fibro-serous membranes, and retrace, step by step, the route of this metastatic rheumatism, gout, &c.; and let us subject to the test of morbid anatomy the truth or fallacy of the doctrine of metastasis. The disease, generally supposed to originate in, and be transferred from the joints, has now seized upon the fibro-serous membrane of the heart, of the existence of inflammation in which we become convinced by the accompanying symptoms. In a few days the acuteness of the inflammation here (as in the joints, a short time previously) is subdued by proper treatment; but at a subsequent visit our attention is drawn to the sudden development of symptoms of violent inflammation of the dura mater, or arachnoid membrane, dependent upon a repetition of the metastasis, not from the joints, but from the pericardium. The inflammation of the organ recently attacked being kept in abeyance by antiphlogistic measures, we find, to our dismay, that the (metastatic) rheumatism has not been arrested in its progress, but has been transferred to the serous membranes of the thoracic or abdominal cavities; and sometimes to the joints whence it originally started. The circuit of the so-called metastasis has now been completed; and to morbid anatomy we must at length appeal, to declare in favour of, or in opposition to, the truth of the doctrine of metastasis, premising that, on according to it a real existence, we cannot reasonably expect to find the signs of morbid anatomy in any part of the system except that most recently affected.

But what is the state of the case? In the post-mortem examination what is the actual condition of the serous membranes successively attacked by this said metastatic rheumatism? What are the pathological lesions revealed to us by the autopsy; and what deductions may be made therefrom relative to this doctrine? There has invariably been observed a striking similarity, an almost perfect identity, in the pathological lesions of the serous membranes contemporaneously or consecutively attacked by this rheumatic inflammation. In all there has been rendered obvious an arrest of secretion of the serous membrane during the stage of irritation, with extreme vascularity and detached opacities on its surface; exudations of plastic lymph and effusions of serum, sometimes sanguinolent, sometimes gelatinous, and at other times purulent; complete or incomplete organisations of the false membranes, with perfect or imperfect agglutination of the opposed surfaces; thickening; fibro-cartilaginous induration; and sometimes ossific transformation of the organised firmly adherent false membranes, when of chronic formation. In each and all of the cavities the fibrous structures of the serous membranes have been found the seats of acute, subacute, and chronic inflammation, and numerously studded with minute

rounded depositions of lymph, in shape and size resembling a collection of millet-seeds, or the granular miliary tubercles of phthisis pulmonalis. Again, these deposits of lymph have been clustered together in such quantities as to form extensive and circular masses, increasing the density of the membranes to two or three lines, and in some cases even beyond six or eight. The accumulation has been so great in certain cases of chronic peritonitis, between the layers of the omentum, and in several other processes of the peritoneum, that in thickness they have exceeded twelve lines. The free surfaces of the serous membranes of the thorax and abdomen, as well as the membranes of the joints, have been found exempt from disease, smooth, polished, and glistening, but presenting a mottled appearance from the ramifications of minute vessels, traversing the yellowish, cream-coloured, greyish, or dark exudations of lymph, irregularly interspersed underneath.

From the evidence we possess of recent acute, subacute, and chronic inflammation being present contemporaneously in the several serous cavities, supposed on the other hand to have been successively attacked by metastatic rheumatism; and from the coexistence of pathological lesions in these cavities, identical in their origin, identical in their appearance, and identical in their physical and chemical properties; from our absolute inability to discriminate between the pathological lesions of the serous membrane pronounced to be the results of idiopathic pericarditis, and of that denominated rheumatic; between those of idiopathic and rheumatic arthritis, idiopathic and rheumatic pleuritis, &c.; in fine, from the subsequent disorganisation of the structures of the serous membranes, progressing *pari passu*, and from the strong similarity these bear to each other, we may not hesitate to negative the doctrine of metastasis with all its fallacies and its evil tendencies.

To anticipate the preferment of an accusation of inconsistency on my part, I consider it requisite to amend such passages heretofore appended by me to cases of pericarditis, published in THE LANCET, as attribute the inflammation of the pericardium and pleura to the metastasis of rheumatism from the joints. I acknowledge that at the time the reports of those cases were published I did acquiesce in the opinions of many eminent men, promulgated in the different works on the practice of medicine. But since that time experience has taught me that many theories, and many doctrines which from their appearance, have been pronounced to be speculatively true, when subjected to close observation and analytical investigation, may be proved to be practically false.

February, 1843.

REFORM IN MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—I read, in THE LANCET for Feb. 4th, page 685, your able article on the false lights of medical science as obstacles to medical reform, with great interest, and although you therein make a humiliating confession relative to the acquirements and the social position of medical men in general, I admit that I read it also with pleasure. It is written in a manly, healthy, strain, and pleads powerfully in favour of such a change in the laws relating to the medical profession as will have the effect of placing the members thereof in a more favourable position than they now occupy in relation to the public generally. I quite agree with you that the cause of quackery owes much of its success to the Act which constituted the authorities of Rhubarb Hall nursing mothers of the medical profession. That Act, and the "old ladies," as you term those who exercise the powers conferred by it, have made pill-mongers—or, as Dr. Sigmond (I think) christened us, "dealers in draughts"—of the great majority of the members of what is *nominally*, and ought ever to have been *strictly*, a profession; and in order that the members of the medical profession may hereafter be enabled to render themselves fit to occupy their proper place in society, and take the lead of the public in scientific matters, it appears to me to be essential that the whole course of medical education should be entirely changed. The fact is, Sir, that we begin at the wrong end, and practice an art before we have learned even its elementary principles. The healing art cannot be acquired by the same means as the knowledge of the trade of a butter-merchant, or a dealer in ribbon and tape. In trades, the inspection of wares and fabrics and bills of parcels suffices to determine their quality and value; not so in the science of medicine, the very elements of which consist of various distinct sciences. Hence, although a long apprenticeship may be requisite for learning a trade, it is to the student of medicine a mere waste of time, which ought to be more profitably employed than in capping bottles and rolling pills. If the system of apprenticeship is to be continued, I think the pupil ought to be thoroughly instructed *by his master*, during that probationary period, in the elementary branches of medical knowledge, viz., in pharmacy, chemistry, botany, and materia medica, for which two years would amply suffice, and at the expiration of this period the pupil ought to be subjected to an examination in these elementary branches of medical science, which examination he having satisfactorily passed, he should apply himself to the study of *medicine* itself, or the art of *curing disease*. Anatomy, physiology, the theory and prac-

tice of medicine and surgery, would now form the subjects of study, and having made some progress in that of anatomy, &c., he would be in a condition to profit from attendance upon the sick, in company with his master. He ought not, however, to be permitted himself to undertake the treatment of disease until he has obtained a licence to practise. The culpable custom of committing the health and lives of the suffering poor to the charge of uninstructed apprentices has a powerful tendency to bring odium upon our useful craft, and to countenance a vulgar and prevalent erroneous notion, that persons who have had opportunities of seeing much practice must, on that account, be proportionately skilful. What useful knowledge, I would ask, does a pupil of six-months' standing gain by visiting the sick and prescribing for them? Ignorant of anatomy and the functions of organised structures, is it rational to regard him as competent to rectify their derangements, or afford effectual aid to suffering humanity? Will he learn more by his professional attendance than the friends of the patient, or so much as the observant and useful nurse? He may witness, 'tis true, the death-struggle of the victim of disease, and thus become familiar with the marks of approaching dissolution, but, assuredly, he will fail to deliver him from the jaws of death. Let us then begin by reforming our educational system, requiring, as a *conditio, sine qua non*, that all who enter the medical profession shall previously have received a good general education; and that all students shall pursue such a well ordered course of medical instruction, during their pupilage, as may appear best calculated to insure the acquirement of the greatest possible amount of accurate medical knowledge in a given period. Then may we hope to see a phalanx of able men, worthy the name of medical philosophers, sufficient to satisfy the wants of the public, and to banish from society the host of quacks, whether designated by the names of pill-mongers, or homœopathists, or otherpathists, who now fatten upon the public credulity, to the great pecuniary loss of the legitimate professors of the healing art. I remain, Sir, your obedient servant,

PHILANTHROPOS.

Feb. 8, 1843.

LIVERPOOL SCHOOL OF MEDICINE.

To the Editor of THE LANCET.

SIR,—Every one who has the sound education of the members of our profession at heart must be delighted with the manner in which you have ever advocated the rights of medical students, and the boldness and determination with which you have exposed the non-fulfilment of the engagements entered into with them by the medical officers of the metropolitan schools and hospitals; but I am afraid the evil extends much further; and if this town (where there is every requisite for an excellent school) may be taken as a specimen, certainly the provincials stand in need, even more than the metropolitans, of your corrective rod. The number of pupils here has, by mismanagement, wofully diminished, there being now studying anatomy only about fourteen; chemistry, four; surgery, three; medicine, three; materia medica, two; midwifery, one. But it is the anatomical department, the most important in a school, the one with which students are most in contact, and the good or bad conducting of which must consequently have so much influence in creating in them enthusiasm on the one hand, or apathy and disgust on the other, which is here in the worst condition. Subjects may here be very readily obtained, yet the dissection of the third one is not yet completed. The demonstrator attempts a half-hour's lecture in the evening; during the day he is scarcely ever in the dissecting-room, and never there at any specified hour, or to instruct the pupils, or facilitate their progress. There is a very good collection of anatomical preparations, but no pupil has access to them; they are locked up; they cannot even be seen through glass.

At that splendid institution, the Liverpool Infirmary, the prospectus states that the fees of twenty and forty guineas "include clinical lectures on medicine and surgery," yet not one is ever delivered!

I trust that some of your correspondents will inform us how these things are done in other provincial towns, and that you will give us the benefit of your helping hand. All the pupils here are disgusted. I remain, Sir, your obedient servant,

X. Y. Z.

Liverpool, Jan. 28, 1843.

CONCLUSION OF THE PROCEEDINGS OF THE APOTHECARIES' COMPANY AT DUDLEY.

To the Editor.—Sir: Having taken upon myself to communicate to you, in your editorial capacity, the proceedings of the APOTHECARIES' COMPANY *versus* LLOYD, I resume my functions, and have the satisfaction of handing you a *literal* transcript of the three last official communications of the secretary to our society, which you will oblige me by publishing in an early number of THE LANCET. I am, Sir, your obedient servant,

J. THOMPSON.

Dudley, Feb. 11, 1843.

"Apothecaries' Hall, May 23, 1842.

"Sir,—The letter of the 17th inst., addressed to Mr. Blatch, bearing the signature

of yourself and several medical practitioners of Dudley, has been placed in my hands as the *law* officer of the society.

"The society will willingly co-operate with yourself and your medical brethren in checking the practice of the individual referred to, if he should prove to be unqualified. I have addressed him a letter on the subject of his practice, and *if it should fail to induce him to relinquish his practice as an apothecary until he is qualified, the society will take such further steps as the circumstances of the case may require.* To enable the society to interfere further it is necessary that they should be furnished with evidence of Mr. Lloyd's practice.* What that evidence must be will be found on a perusal of the enclosed circular. Upon evidence being furnished the society will instruct an agent on the spot to complete the case by the examination of witnesses. I am, Sir, your most obedient servant,

"ROBERT UPTON, Clerk to the Society."

"Apothecaries' Hall, Oct. 21, 1842.

"Sir,—The society having given directions at the last meeting of their committee *that proceedings should be instituted against Mr. Lloyd*, if the evidence which may be obtained should warrant such proceeding, I shall be obliged by your suggesting the name of a solicitor of respectability, at Dudley, who would be willing to act upon the society's instructions in examining witnesses *in proof of Mr. Lloyd's practice.* You are probably aware that the cause, if it should proceed to trial, can only be tried at the assizes. I am, Sir, your most obedient servant,

"ROBERT UPTON."

"Apothecaries' Hall, Jan. 5, 1843.

"Your letter of the 22nd of Oct., in reply to mine of the previous day, was received, and I am obliged by your recommendation of Mr. William Fellowes. The reason of the society not having communicated with that gentleman has been that *they have been in correspondence with Mr. Richard Lloyd* on the subject of his qualification to practise as an apothecary.

"*It is not the province of this society to pronounce, authoritatively, on the legal qualification of an individual to practise as an apothecary, nor are they to be understood as deciding upon that point in the present instance.* I am directed, however, to inform you that after considering the evidence which has been adduced by Mr. Lloyd in proof of his having practised as an apothecary *prior to the 1st of August*, 1815, the society do not feel themselves called upon to institute proceedings against him for the recovery of penalties on the ground of his having practised as an apothecary *without legal qualification.*

"I have to request that you will be good enough to communicate the contents of this letter to the gentlemen whose signatures are, with your own, attached to the letter to the society of the 17th May last. I am, Sir, your most obeient servant,

"ROBERT UPTON."

Favete-plaudite.—So ends this farce, and the soi-disant M.R.C.S.'s may persist in practising with impunity, in personally insulting and threatening with violence the resident members of the profession, and in interfering in their attendance on patients, and vilifying and libelling their characters; and this upon such evidence as, in the case of Mr. Lloyd, amounted to a communication from a schoolmaster at Newcastle-upon-Tyne, that *he*, the schoolmaster, was attended by Lloyd in 1814! Lloyd has recently established a manufactory for shaving-soap, which he retails at one shilling per pot, or at ninepence, if you "find your own pot."

J T.

[Since the above communication was sent to press the following note has been sent to us by our correspondent, Mr. Thompson]:—

Feb. 13.—I beg to enclose to you one of the hand-bills of Mr. Lloyd, which I have only just obtained, and to add that he has resigned his claims to professional employment to his son, Reuben Lloyd, an unqualified scion, who practises uninterruptedly, and hesitates not to make out his bills without availing himself of the subterfuge of his father's name. That the authorities at Apothecaries' Hall will pay their respects to the son is little to be expected. Indeed, so small is the reliance of the profession in this part of the county upon the worshipful company, that the qualified practitioners of West Bromwich have subscribed their small savings to prosecute an unlicensed "Macbride," because "the society" either cannot or will not take that duty upon themselves.

The hand-bill commences and runs on thus:—

"Lloyd and Co.'s Royal Albert Shaving Composition, for ease, convenience, and comfort in shaving, 1s. the pot, in squares 9d. Sixpenny-worth of the composition is the least that can be supplied. It instantly yields a delightful, adhesive, lasting, and substantial lather," &c. &c.

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* This has been done.—*J. T.*

DR. WILLIAMS' EXPERIMENTS ON PATIENTS AT ST. THOMAS'S HOSPITAL.

To the Editor.—Sir: With astonishment I have read in a recent number of THE LANCET (page 628), an account—short, but startling—of a series of experiments on "possible remedies in phthisis," performed

by Dr. Robert Williams, physician to St. Thomas's Hospital; performed, I presume, in St. Thomas's, and described at the Medico-Chirurgical Society, but only eliciting from the members of that body a discussion on the curability of consumption. The author being satisfied in his own mind "that general treatment was of little avail, and that the cure of the disease must be sought for in a specific remedy," conceived the design of instituting the experiments in order to discover the supposed specific. After almost exhausting the interior of the earth in search of it, he had recourse to "every wood, every bark, and every gum that he could obtain," and next tried every seed that Messrs. Charlwood, of Coventgarden, could furnish, and no doubt they supplied many poisonous ones; but all of which the patients were compelled to swallow, dose after dose. And then we are told that in all the cases experimented on the result was uniformly fatal, and that the pathological appearances were the same as if the ordinary form of treatment was adopted. Next we are very coolly told that no injury was done excepting in two cases, which were treated with *white hellebore*, but in which two "death was so remarkably hastened that it seemed as if the hellebore, or the veratrum which it is said to contain, acted as a poison in phthisis."

Here is a startling acknowledgment,—two debilitated, consumptive patients, experimented on in St. Thomas's Hospital, so suddenly die that the physician by whom the experiments were conducted is forced to admit that the drug poisoned them! *Ergo*, the doctor convicts himself of homicide. What tampering with human life! This is experimenting with a vengeance. Our public hospitals are converted into experimental laboratories, and the stomachs of the unfortunate patients into crucibles. Magendie was denounced, in no measured language, in the House of Commons, by the benevolent Martin, for his experiments on some of the lower animals. What would be the language of the same feeling individual could he read the startling account of the physician of St. Thomas's Hospital—not upon the lower animals, but on fellow-men—who, from poverty and disease, are compelled to avail themselves of the refuge provided by the bounty of the charitable, where they should find every comfort that is necessary for their condition, and a humane and skilful physician, who, they believe, if he cannot cure the disease, will at least alleviate it. But in the latter expectation the confiding sufferer is deceived, and instead of a skilful physician encounters an experimenting ——.

The doctor was not even satisfied with the one series of experiments, by which he poisoned two unoffending mortals, but he instituted another for the purpose of ascertaining the increment and decrement of weight in consumptive individuals, subjecting the unfortunate patients to the no small inconvenience of being periodically weighed. To this annoyance only eight were found to submit, and many of the experiments were terminated suddenly by the patients leaving the hospital. We all know the fallacious hopes of phthisical patients, and that hope, even fallacious hope, is pleasant. But here the unfortunate sufferers, by this system of weighing, were deprived of even that; for when, perhaps, they were flattering themselves upon their supposed increase of flesh, and with it strength, the weighing machine at once brings them to the proof, and by it they are in a moment, perhaps, deprived of their only solace. Are the governors of St. Thomas's and the other London hospitals aware of this disreputable system of experimenting upon, and tampering with, the comforts and lives of unfortunate individuals who seek relief in their establishments? But even if they be, and sanction such proceedings, we may rest assured that the wretched and unsuspecting patients themselves are utterly ignorant of it before entering the wards.

After the disclosures made by Dr. Williams, an inquiry into the whole affair surely ought to be set on foot, and the treatment adopted in future in the hospitals narrowly scrutinised, or what security can the patients have that they will not be poisoned with *white hellebore*, or any other deleterious drug?

I am, Sir, your obedient servant,

B. G.

Little Chelsea, Feb. 1843.

On the Curative Influence of the Climate of Pau, and the Mineral Waters of the Pyrenees on Disease. By A. Taylor, M.D., &c. London: J. W. Parker, West Strand.* (Concluding notice.)

The subject of mineral waters has always been one of very considerable interest, affording matter upon which the physician, the naturalist, and the historian, have at various times exercised their respective powers. What Bethesda owes to sacred writ, the bubbles of Nassau owe to Sir Francis Head; and the different springs of Germany have found an advocate in Dr. Granville, who is now ranked amongst the number of "their Gods." Notwithstanding all that has been undertaken in their favour here, as elsewhere (and we hail them with pleasure again bursting forth in the valleys of the Pyrenees), still the public mind is divided in opinion as to their intrinsic merits, ascribing to other accessory causes all those

* Vide Lancet, *ante*, p. 515.

good services which their panegyrists consider to be due to their genuine influence. By many persons, and by professional men even, they are regarded as an apology for changing the routine of life, for quitting the hum of men, and the thousand anxious cares of business and office; and they consider them merely as remedies for such complaints as yield upon the removal of the excitement which has generated them. What inhabitant of Cheltenham, say they, was ever cured by drinking from the springs at the foot of which he is domiciliated? In England they are by many considered to be a kind of medical Chiltern Hundreds, which remove a troublesome patient from his post, and in France, where we hear that a minister *est allé aux eaux*, we conclude that he has resigned office.

If we view the matter in a more serious light, and ascribe to them a real merit, we shall still find the subject involved in much perplexity; for some, who acknowledge their efficacy, will ascribe it to the maximum, others to the minimum, of their ingredients; whilst a third class, losing sight of all medicinal qualities, impute it all to electro-thermal influence.

We believe that the late Dr. Murray was the first chemist who grappled the subject with a masterly hand, by pointing out the real nature of their constituents. He found that in the process of analysis the acids, and the bases of their salts, changed places with each other, and thus accounted for the anomaly of a supposed inactive remedy producing considerable power on the system. Startled at the fact that aperient springs should yield saline matter, which possessed no such power upon the animal economy when given in its solid state, he investigated the subject more minutely, and brought to light the interesting and important fact that *the affinities underwent change in the process of evaporation;* that the sulphates and muriates changed their bases, so that the salts of analysis were not those which were dissolved in the waters as they issued from their beds. This discovery restored them to chemical importance and medical favour, removing some of the scepticism which former analyses had produced, as regarded their operation upon the system, which was by many attributed to *quantum* of potation, and not to medicinal property.

The advocates of infinitesimal doses find no cause for congratulation in this discovery, and a third class, as before observed, call in the aid of thermal electricity. The steamboats and railroads afford such easy ingress into the heart of Germany, that it would argue a want of genius in German speculators if they did not take advantage of it to turn their few resources to good account, and, shut out from the salt ocean, they have multiplied their saline springs in compensation for that deprivation. The press, *well fee'd*, has done them much service, and enabled them to carry on their operations upon a splendid and extensive scale. The attractions are so considerable that a few months' residence at the German Spas is necessary to the existence of a numerous class who would hardly know where else to pass their summers; and some few, tired of their family apothecary, who has so long furnished them in retail, hope to obtain more benefit by appealing to nature's wholesale laboratory.

Very different was the scale of attraction and accommodation in the establishments which we visited in the Pyrenees some twenty years ago, from those which we have lately seen in Germany. Here we saw the waters gushing from the mountains, and melting the snow and icicles as it poured down their sides, which seemed as if struck by the rod of the lawgiver. Appropriate vessels received the element, and houses of accommodation were erected, hard by, to afford necessary comforts to the invalids, as all were supposed to be valetudinarians who frequented this spot. No Kur-saals, rivalling each other as specimens of architecture, no ball-rooms, no theatres, nor spiel-houses, were extant in those days, to attract visitors to sojourn at the *Eaux Chaudes* which lie at the foot of the majestic Pyrenees. The access to these sources is still difficult. A long land journey is necessary to reach this extremity of the empire, and situated in a kind of *cul-de-sac*, which allows of no transit, these mineral springs have not the advantages of locality to help them into fashionable notoriety.

Dr. Taylor commences his eleventh chapter with a history of mineral waters, which were known and recognised as medical agents, both to Greeks and Romans. Strabo and Galen attributed high virtues to them, and Pliny, in his "Natural History," speaks of acidulous, sulphurous, saltish nitrous, alu-

minous, ferruginous, and bituminous, recommending sulphurous for the nerves, and aluminous in cases of paralysis. They found particular favour with the ancients, in diseases of the skin. Charlemagne, aware of their nature, caused large baths to be erected at Aix-la-Chapelle. Neglected in the times of barbarism which succeeded to his death, they were again brought into notice in the reign of Henri IV., who issued edicts for especial care and attention to be paid to the mineral springs of the Pyrenees:—

"The temperature of thermal springs is without doubt one of the most surprising, as well as obscure phenomena of our globe, and many hypotheses have been proposed as a solution of this difficulty. The temperature of these springs, always under that of boiling water, has yet remained nearly the same for ages. Some sources occasionally show an appearance of ebullition, but this occurs principally during storms, and is produced by the disengagement of nitrogen and carbonic acid gas from an altered state of atmospheric pressure."

Dr. Taylor gives a sketch of the theories of different authors upon the subject of thermal springs; but after having convinced himself, as his readers will be convinced, that they are all unsatisfactory, he comes to the positive conclusion that there are "some mysteries of nature which are at present veiled from human vision."—P. 177.

There is a peculiar substance found in the sulphurous springs of the Pyrenees, which is not met with in the same kind of waters in Germany. This matter has been examined, and, according to microscopical evidence, is of a vegetable nature, to which the name of "Baregine" (from *Bareges*) or "glairine" has been given. It imparts an unctuous property to the water, and is supposed to possess specific virtues in resolving "muscular rigidity, tendinous contractions, and rheumatic affections of joints."

Quoting the authorities of Chaptal and Vauquelin, who confessed that chemical analysis had done little in the sense of discovering the causes that produce the effects which mineral waters have upon the system, Dr. T. flies to the electro-thermal principle. This has the advantage of *a name* in its favour, whether it be understood or not, and serves, as did the old term "capacity for caloric," to account for causes, and for the investigation of phenomena for which our own capacities do not at all times prove sufficiently capacious.

The positive action of these springs upon the system is very considerable, and we would direct attention to the able description which the author has furnished of their effects, and of the cautions that are necessary to be observed in their administration, both internally and in the form of douche. We recommend to the public the perusal of the whole of the twelfth chapter, as embodying much useful and scientific matter. We shall only quote the following passage:—

"Having thus given in a general way the effects of the waters taken internally and by bath and douche, the inquiry naturally follows, Are these effects constant in all states of the human system, and is it desirable and safe, under all circumstances, to produce them? In other words, What are the indications arising from diseased action which invariably and safely appeal to the curative influence of these mineral agents; and what are they where the result would not only be doubtful but highly prejudicial?"

The Report of the Royal Academy of Medicine in France is based upon the abovementioned inquiry, as it commences with the proposition, viz., "May we prescribe without distinction the different mineral sources for all chronic maladies?"—a singular question, as the author observes, to be agitated in the present day, but not more singular than the variety of opinions which exist upon this subject. The report is given at length, and will be interesting to many readers, in a general sense, as regards mineral waters, and as few may have an opportunity of reading the original, they will be indebted to the author for affording them this advantage.*

Bagneres de Bigorre claims the first attention among these mineral waters, not, however, so much for the energy of its springs, as from the circumstance of its climate, which is similar to that of Pau, and exercises the same sedative powers upon the air-passages and general pulmonary apparatus, as the latter; hence it is placed as a convenient stepping-stone to the invalids who have wintered at Pau, and who will find the advantage of commencing their water campaign by halting first at these springs, which are wholesome preparations for the more

* Rapport sur les Eaux Minerales Naturelles fait au nom de la Commission des Eaux Minerales pour les anneés 1838-39, et lu a l'Academie Royale de Medicine le 14 Aôut, 1841.

energetic ones to be subsequently used in the course prescribed for patients:—

"The general action of the saline springs of Bagneres de Bigorre is that of a mild stimulant to the mucous membrane of the stomach, soliciting a greater and improved secretion of gastric juice, and thus restoring a healthy power of digestion enfeebled by organic torpor. The kidneys are the first to feel their influence, their diuretic effect is more considerable than their laxative, and the lymphatic system testifies its increased action by a more energetic process of absorption. In certain affections of the skin, in muscular contractions, diseases of the bones and their articulations, and in chronic rheumatic affections, the saline mineral baths effect considerable benefit not only independently, but as a preparative to other stronger medical agents. In many cases the conjoint action of the external and internal operation of these waters produces the most decided good effects."—P. 242.

The waters of Capbern deserve a special and independent notice, *per se*, owing to the extrordinary effect which they are said to produce upon the uterine system in particular, and in their exciting a more vigorous circulation in the organs which have their site in the lower, abdominal, and pelvic regions, and an activity in the functions of renal secretion. "Left exposed in an uncorked bottle for months, the water deposits a great quantity of a flocculent substance without its appearing to be sensibly changed;" and the author suggests the possibility that the stimulating influence which the Capbern waters exert upon the uterus may depend upon the same or some analogous principle which gives to the ergot of rye its powers over the function of this organ, and that this flocculent substance may be a new combination of some subtle vegetable entity, which had eluded previous analysis. If the following statement regarding the effects of these waters be borne out by a sufficient number of observations, we think that the most sceptical will be convinced that these medical agents are entitled to more consideration than is granted to them from such accessories as are derived from change of climate, occupation, &c., by those who frequent them for the re-establishment of their health:—

"There is a phenomenon with regard to the sulphurous waters of the Pyrenees, which is, that they act centrifugally on the circulation, from the centre to the surface, and even have the power of bringing hidden things to light, such as balls, pieces of wadding, cloth, or exfoliated bone, however deeply they may be lodged; on the other hand, the the saline waters of Capbern exert an influence vertically upon the circulation, by determining congestions of blood towards the inferior, and creating safe outlets from the uterus, kidneys, hæmorrhoidal vessels, and mucous exhalants in the lower bowels."

Hence, from the earliest times, they have been renowned for their virtues as an antidote to sterility. We are told by a good medical authority,—"Tous les ans en effet, on voit un essaim de femmes nouvellement ou depuis long temps marieés venir a Capbern, dans l'espoir d'y trouver le doux titre de mére; et bien souvent votre Naïade leur accorde cette faveur."

We are not surprised to find, from these effects, that the climate is here very different from that of Pau, which exercises such sedative effects upon the arterial system (see LANCET, page 515). Here the climate is characterised by its stimulating powers, so that the diseases prevalent among the natives are those of high action and arterial disturbance. The influence of the climate of Capbern in altering the lymphatic diathesis of the inhabitants of the villages in low and confined situations, who have removed to that place, has been a subject of observation and congratulation for ages; persons afflicted with goître being, after a few years' residence without any other remedy than the change of air, entirely cured of this miserable disfigurement.

In concluding our observations on Dr. Taylor's account of the mineral waters of the Pyrenees, which is rendered interesting to all classes of readers by the introduction of historical matter, and descriptions of picturesque scenery, serving as a hand-book for that part of the globe, we arrive at the conclusion that the *sulphurous* springs are those which demand the largest amount of attention in a medical point of view. They seem to be endowed with very peculiar powers, and to exert an influence on the economy which is not traceable to their chemical constituents, or to their high temperature, for those which are the most elevated are not the most stimulant. The waters of Cauterets indicate 131 of Fahr.; yet they do not possess the advantages which are attributed to Capbern, whose temperature is only 76. The latter, however, are not classed among the thermal springs, and we must look for their effects in the quantities of salts which they

contain; or, perhaps, seeing the very minute quantity of these, look for it in the flocculent vegetable matter which the author conceives to possess the qualities of the ergot of rye.

In the hot springs we have also the vegetable matter of Baregine upon which to exercise our speculations, and these two principles, therefore, may be considered as being the most worthy of researches of analytic chemists in the mineral springs of the Pyrenees.

We may safely assert that those who are disposed to explore those regions will find Dr. Taylor's book a very pleasant travelling companion, and invalids will reap much advantage from the judicious observations with which this highly useful little volume abounds.

THE LANCET.

London, Saturday, February 18, 1843.

It is admitted on all hands that many of the evils under which the medical profession now labours, are owing to the teeming multitude of practitioners. This necessarily involves an impoverished state of the profession, and has, doubtless, contributed largely to that depression of intellect and morals among its members, which, by a reciprocal action, has augmented, and been augmented by, the effects of bad legislation. The means of restraining this superfluity of doctors, and rendering the number of the profession more proportionate to the population, become, therefore, very important objects of medical legislation. The object might be attained in any one of several conceivable ways:—

First. By a direct numerical limitation—a plan that is incompatible with the institutions of a free country, and extremely difficult to reduce to practice under any circumstances.

Secondly. By insisting on a very expensive mode of education—an execrable system, which would measure intelligence by the length of the purse, and exclude from the sphere of public utility all men of small pecuniary means, however highly-gifted, and well adapted to the profession of medicine.

Thirdly. By protracting needlessly the course of medical education, a system in daily-increasing favour with our ruling bodies, and which has doubtless been founded on that ingenious modification of donkey-racing in which he who goes slowest wins the day. This method would have, practically, the same tendency as the preceding.

Away, then, with all such unjust and foolish schemes. Fortunately, there yet remains a rational and equitable way of compassing the proposed end, which is,

Fourthly. By making the standard of qualification high, as well in medicine as in letters and science; and testing that qualification by a fair and practical examination, without the slightest reference to the questions *how* the candidate acquired his knowledge, *where* he acquired it, or *how long* he was in acquiring it.

If this principle were adopted, the numbers of the profession would be effectually limited without any injurious exclusions; the character of the profession would be greatly elevated, and the public welfare would be promoted, by giving to the art of medicine its utmost efficiency in practice.

But, it may be asked, would not this press dreadfully hard upon the student? Would it not make the difficulty of getting a diploma almost insurmountable? We answer, No. The course of study, and the kind of examination, which we contemplate, would render the acquisition of a diploma easier than it now is to a well-informed candidate, but impossible to an ignorant one.

Let us explain ourselves:—First, with regard to preliminary education. No benefit can arise, but, rather, the reverse, from setting a youth to study medicine before the age of seventeen or eighteen. By that time, if he be intelligent and industrious (and if he be not he is quite unfit for the profession), he will easily have attained such a degree of

classical, scientific, and general information, as will form a proper foundation for the future superstructure of medicine; and we are of opinion that he ought to be thoroughly examined on these heads before he is initiated into the study of his profession. Do not require of the student a degree in arts, because you then drive him into a residence at a university, which would be just in the spirit of the present system, which we reprobate; but have a literary and scientific board of examination, connected with the medical faculty, and let that board ascertain that the candidate is qualified to enter on the study of medicine, no matter whether he got his information at Oxford or at Nova Zembla.

With respect to the medical examination, it is perfectly clear that an hour's *talk*, or a talk of any duration, can never determine whether a man be fit or not for the exercise of a practical art.

Under the present system a well-crammed booby—a walking sausage, in fact—endowed with a moderate share of impudence, or apathy, may get through his examination, while a highly-talented and well-informed young man, if diffident, may have all his knowledge hustled out of his head for the moment, and be rejected. An exclusively oral examination can never test a man's real proficiency in such a study as that of medicine. In fact, the exposition, in language, of subjects which can only be taken cognisance of by the exercise of the æsthetic powers, can never afford a just estimate of the knowledge of those subjects possessed by any individual. One man, well acquainted with a given object, and capable of demonstrating it in all its bearings, if it were placed before him, might be able to give but a very poor idea of his knowledge by a verbal description; while another man who had not as much real knowledge of the same object as the former, could present us with a showy sort of description of it, owing to a greater facility of recalling impressions derived immediately from the external senses, and perhaps, also, to a greater fluency or felicity of expression. Many a man who could dissect and demonstrate with ability any part of the body that was set before him, would make very poor work of a verbal description, in the absence of the subject; while another, who might answer questions very passably on the anatomy of the same part, might maul it most ridiculously when he took the scalpel into his hand, and show that he had, in effect, no practical knowledge of its structure. The same individual who gave a very good nosological definition of a disease, might fail to recognise the first actual case of that disease which presented itself; and, *vice versâ*, an individual who evinced much acuteness of diagnosis at the bedside of the patient, might give but a clumsy definition of his disease before a board of examiners.

We mean not to say that the power of recalling with facility the impressions of sense, and the gift of fluent and lucid expression, are not most valuable accomplishments, but we do assert that the mere exhibition of these powers will not prove that a man possesses a practical and available knowledge of medicine.

"But," say the advocates of the present system, "how can you bring the knowledge "of the student to the practical test you speak of?" Simply thus: Let a portion of the human body be given to him, with a reasonable time to dissect it, and then let him demonstrate it before his examiners, and answer their questions concerning its physiological, pathological, and surgical relations. Let him be taken to an hospital, desired to form the diagnosis of a certain number of cases, and to prescribe for those cases; and let him answer such questions relative to their pathology as the cases themselves naturally suggest. Let him be taken into a chemical laboratory, required to perform some experiments, and explain the actions which occur. Let him be taken to a botanic garden, with a Flora in his hand, and made to recognise some plants by their botanical characters, and to state the virtues, and doses, and chemical and geographical relations, of those which are medicinal.

It is needless to go further into detail. A

practical examination in medicine cannot be instituted in the space of an hour, or by means of words only. It must be conducted at intervals, and must bring the candidate into actual contact with the objects of his studies. "But," again say the objectors, "would not such a mode of examination dreadfully harass the mind of the student, by keeping him so long under the "ordeal?" Not in the least. The well-informed student would find it no ordeal at all. He would merely be asked to do what he had been for months and years in the constant habit of doing, and felt his own perfect ability to accomplish. Such an examination would try his *knowledge* not his *nerves;* whereas the present mode of examination tries the nerves of the candidate much more than his knowledge. But where, it may be asked, shall we meet with a board competent to conduct such an examination as we have been describing? Assuredly not among any body now in existence. Not among physicians ignorant of surgery, nor surgeons ignorant of medicine, nor rhubarb-venders ignorant of everything but how to insult their betters. We look for the formation of such a board as probably an immediate, and certainly an eventual, result of the establishment of ONE FACULTY. Such a board must consist of men of extensive and accurate knowledge, of unblemished integrity, and well-known benevolence. They must have an ample remuneration for their services, but not one sixpence of that remuneration must be contingent on the success of the candidate. At present a student may happen to be successful or otherwise at his examination, quite independently of his merits, and according as avarice or ill-humour predominates in the mind of the examiner.

Before the candidate has opened his mouth, success may be lurking for him in a vacant nook in the censor's breeches-pocket, or rejection may be hatching in the obstructed extremities of his portal vein. We do not believe that such things happen often, but we contend that they ought to be made for ever impossible. A proper board of examination should have no object in view but to institute a searching, though kind and courteous, investigation of the question, whether the candidate who comes before it be, or be not, competent to practise his profession. If such principles as those we have briefly set forth pervaded medical studies, and medical examinations, what a transformation would be effected in the profession, and in its relations to society! It would no longer be over-stocked, as it is now, and yet no worthy member would be excluded. The public would feel and know that the profession generally was entitled to their full confidence and respect; and the profession instead of being, as it now is, a motley mixture of science, and ignorance, and quackery, and poverty, and ostentation, and liberality, and meanness, and all sorts of heterogeneous ingredients, would stand forth in bold relief from the dull ground of its present abasement, as a compact and well-organised body of high-spirited, and learned, and scientific English gentlemen.

ROYAL COLLEGE OF SURGEONS.

HUNTERIAN ORATION.

February 14, 1843.

MR. ARNOTT delivered this oration. The theatre, as usual on these occasions, was crowded in every part. The orator, after some preliminary observations, and an allusion to Sir A. Cooper, proceeded to speak of the late Sir Charles Bell, respecting whom he detailed the following particulars:—

Sir Charles Bell was born in 1775, and after passing some years at the High School of Edinburgh, began the study of anatomy under his brother John. That brother, twelve years older than himself, was already in high repute, both as a surgeon and a lecturer. The instructions of such a teacher could scarcely have been heard without profit by an ordinary pupil; their effect upon Charles Bell was shown by the publication, in his twenty-second year, of the first volume of his work, "System of Dissection," which was marked by his characteristic originality.

At an early age he was appointed surgeon to the Royal Infirmary, but the feuds which at that time distracted the profession in Edinburgh, as well as other causes, induced him to try his chance in the metropolis of the world, and Mr. Bell came to London in

1806. The rest of his career is well known to you; at any rate it is unnecessary to dwell on the professorships which he held, or the other marks of public distinction which were showered upon him. I will content myself with touching upon a few of the more prominent points of his genius and character.

As a surgeon Sir C. Bell ranks high, "if not first, in the very first line;" his "Letters on the Diseases of the Urethra," his "Surgical Observations," and other works, show how deeply he had studied, and how diligently he had practised, the art which he professed. His dexterity and coolness as an operator were remarkable; yet he went to operations with the reluctance of one who has to face an unavoidable evil; in this respect resembling Hunter, and many other first-rate surgeons. Like Cheselden, who is said always to have turned pale when about to cut for the stone, Bell's cheek has been seen to blanch on proceeding to operations performed with the utmost self-possession and skill.

Still more eminent was he as a teacher of anatomy. In the lecture-room he shone almost without a rival; his views were nearly always solid and always ingenious, while his manner and language enchained the attention of his audience. Dull indeed must have been the pupil who could have slumbered when Charles Bell was in the professorial chair! In his hands dry bones lived again, imagination clothing them with the textures which had once invested them. A muscle was no longer a mere bundle of fibres rising here and inserted there; it was a guide to the surgeon's knife in some important operation, or kindling with hidden fire, betrayed by the anatomy of its expression the emotions that lurked within; and the flaccid artery on the table spouted forth its crimson stream and demanded the arresting hand of the skilful surgeon, or threatened death as the alternative. In short, Sir C. Bell made his pupils think; and interesting as anatomy is, even if considered as a mere branch of natural history, he taught them to value it most of all as a guide to the art of healing. The time, however, will arrive when all the contemporaries of Charles Bell, all in whose ears those impressive tones still linger, shall have been swept from the scene; yet his fame will still live; he will be remembered as the discoverer of the varied functions of the nervous system.

Let me be permitted to make an observation or two upon the opinions of physiologists concerning this subject, both before and since the publication of Sir C. Bell's views.

It is well known that each spinal nerve arises by two roots, and it is now generally admitted that to the anterior one belongs the power of controlling motion, to the posterior one that of governing sensation. It had formerly been thought that each spinal nerve possessed in common the power of ruling both motion and sensation, and in some cases additional functions. This may be called the popular theory. Yet glimmerings of the truth had occasionally been forced, as it were, upon reflecting physiologists; for the ordinary theory was obviously insufficient to explain why sensation remains in a paralytic limb, when the power of motion is lost; and why, on the other hand, motion survives feeling in cases of anæsthenia. But although it had been conceived by some that the nerves of sensation were distinct from those of motion, yet no progress had been made in pointing out the principle in the anatomy, on which one nerve could minister to sensation, another to motion; and the singularly original remarks of Hunter, in his paper on the Nerves of the Organ of Smell, concerning two or more nerves coming from different sources to supply a single part, had fallen unproductive; they had not met with a congenial soil.

The multiplicity, intricacy of arrangement and distribution of the nerves at an early period attracted the eager attention of Sir Charles Bell, and I have it from one who on several occasions had seen and heard him, so far back as 1806, rise from the contemplation of the subject with the exclamation, "We must make something out of these nerves." And in the year 1807, he had already got a glimpse of the fundamental principle of his subsequent researches, as the extracts I am about to read will show you. They are from letters addressed to his brother, George Joseph Bell, then at the Scotch bar, now professor of law in the University of Edinburgh (for the talent of the family had not been engrossed by anatomy and surgery), and fortunately the letters were written before the revival of the fashion of envelopes; the first from which I quote having endorsed upon it the postmark, London, Dec. 5th, and Edinburgh, Dec. 8, 1807.

"My new anatomy of the brain is a thing that occupies my head almost entirely. I hinted to you formerly that I was *burning*, or on the eve of a grand discovery. I consider the organs of the outward senses as forming a distinct class of nerves from the others. I trace them to corresponding parts of the brain totally distinct from the origin of the others. I take five tubercles within the brain as the internal senses; I trace the nerves of the nose, eye, ear, and tongue to these. Here I see established connection—there the great mass of the brain receives processes from the central tubercles. Again, the great masses of the cerebrum send down processes, or crura, which give off all the common nerves of voluntary motion, &c. I establish thus a kind of circulation, as it were. In this inquiry I describe many new connections; the whole opens up a new and simple light; the nerves take a simple

arrangement, the parts have appropriate names, and the whole accords with the phenomena, with the pathology, and is supported by interesting views. My object is not to publish this, but to lecture it; to lecture it to my friends—to lecture it to Sir Joseph Banks's coterie of old women—to make the town ring with it, as it is really the only new thing that has appeared in anatomy since the days of Hunter, and if I make it out, as interesting as the circulation, or the doctrine of absorption. But I must still have time; now is the end of a week, and I will be at it again."

In another, postmark, Dec., 1807:

"I really think this new view of the anatomy of the brain will strike more than the discovery of the lymphatics being absorbents."

And in a third, postmark, March 28 and 31, 1808:

"I have been thinking of having a room, five or six miles from town, and pursuing there my physiology of the brain—that which is to make me, I am convinced."

At length, in an essay entitled "An Idea of the Anatomy of the Brain," printed in 1811, Sir C. Bell developed some of the principles destined to exercise so important an influence on the theory of the nervous system. Having called attention to the prevailing doctrines of the anatomical schools that the whole brain is a common sensorium; that the mind, by the same nerve which receives sensation, sends out the mandates of the will to the moving powers, he proceeds to state that the parts of the cerebrum have different functions, that the nerves we trace in the body are not single nerves possessing various powers, but bundles of different nerves, whose filaments are united for the convenience of distribution, but which are as distinct in office as they are in origin from the brain. Directing attention to the fact of the medulla spinalis having a central division, and a distinction into anterior and posterior fasciculæ, he relates how he was thereby led to make those experiments, of which he describes the results, upon the anterior and posterior columns of the spinal marrow, and upon the anterior and posterior roots of the spinal nerve, and how he thereupon had come to the conclusion that every nerve possessing a double function obtains this by having a double root.

Adhering to the important principle thus clearly laid down, Bell next directed his inquiry to the facial nerves, and, aided by his indefatigable pupil and coadjutor, Mr. John Shaw, instituted experiments to assist him in determining their functions, more especially those of the portio dura of the seventh and those of the fifth pair. Happily he did so, for without the fortunate circumstance that in certain parts of the body, especially on the face, the nerves of sensation and motion are distinct throughout their whole course, his great discovery could never have been clearly established. The results were communicated to the Royal Society, in a paper read before that body in 1821, and this was afterwards succeeded by others.

It was about this time, when he was making the most important advances in obtaining positive and undeniable proof of the truth of his doctrine, that we find him, under an impulse like that exhibited in 1807, addressing his brother in Edinburgh, in a letter bearing date August 17, 1819; he says,—"When you left us I told you that I was to sit down to my notes of the nervous system. Believe me, this is quite an extraordinary business. I think the observations I have been able to make furnish the materials of a grand system, which is to revolutionise all we know of this part of anatomy, more than the discovery of the circulation of the blood. I have a good deal still to do. How I am to bring it forward I do not know. I think by lecture in the first place; then a little essay, explaining the outline of a new system; and, finally, by magnificent drawings and engravings of the whole nervous system."

Notwithstanding the rare and important matter which it contained, the "Idea of a New Anatomy of the Brain," had failed to attract attention. Not so the first paper which appeared in the "Philosophical Transactions;" his views and opinions were now questioned, doubted, denied; then a certain amount of truth allowed to them; but ultimately the real and substantial credit of a patient, laborious, and original inquiry was attempted to be wrested from him and attributed to others, whose single merit in this part, at least, of physiology, consisted in the adoption of that key which Bell had invented, fashioned, and shown how to use, a key without which the secrets of the nervous system, so far as they are now known, had probably yet remained concealed.

In estimating Bell's claims as a physiologist we are not called upon to regard the memoirs on the nervous system as complete and perfect. Along with all that is distinct and precise, we may allow that there are some allegations not quite specific. We may grant that the functions of the posterior roots of the spinal nerves were therein suggested rather than positively stated. We may acknowledge, and he himself did acknowledge, that he misinterpreted an experiment in his first attempt at proving that which he afterwards did prove, through Mr. John Shaw, that the fifth nerve is a nerve of motion as well as sensation. And we may agree in receiving with doubt, or at least without conviction, as not yet proved, his views with respect to certain nerves being superadded, in the higher class of vertebrate animals, with a distinct tract or column in the brain or spinal marrow, for the purpose of respiration.

But after all these acknowledgements

there remains to him, clearly and unequivocally, the merit of having first shown—

That, in investigating the functions of the nervous system, we must direct our attention to the roots, and not to the trunks of the nerves.

That the nervous trunk conveying motion and sensation consists of two distinct sets of filaments in the same sheath.

That the filaments for motion form a distinct root from those for sensation. And

That the anterior roots of the spinal nerves are for motion, leaving it to be inferred that the posterior are for sensation.

That the portio dura is a nerve of motion, and the fifth a nerve both of sensation and motion.

And, lastly, of having been the first who, dissatisfied with the observation and study of the mere form of the various parts of the nervous system, applied the method of experiment to aid him in determining their functions.

In a word, there belongs to Bell the great discovery, the greatest in the physiology of the nervous system for twenty centuries, that distinct portions of that system are appropriated to the exercise of different functions.

Important practical lessons were derived from these discoveries, and were applied at once by Sir Charles and Mr. John Shaw, before all other observers. Perhaps the most important was the distinction of a local nervous affection from that which depends on disease of the brain. In illustration of this Mr. Arnott related the following anecdote from Grimm's Correspondence: — A physician in Paris, on visiting a case, found an abbé playing at cards in the patient's chamber. Struck by the unfavourable aspect of the abbé's face, he informed him that he had not a moment to lose, but must be carried home instantly. The abbé, overpowered with terror, was taken to his lodgings, where for several days he was bled, cupped, and purged, till he was brought to the brink of the grave; yet his face still bore the appearance which had so much alarmed the physician. The brother of the patient at length arrived from a distant part of France (there were no railways in those days), and asked what was the matter with his unfortunate relation? "Don't you see," said the bystanders, "his mouth is all on one side?" "Alas!" he replied, "my poor brother has had his mouth on one side these forty years!"

Even supposing, however, that this were the sole practical lesson as yet deduced from Sir C. Bell's discoveries, it would be unjust to measure their merit by this alone. Independently of the direct instruction to be derived from them, they have brought physiologists into the true path; and should the dim veil which nature has thrown over the operations of the nervous system be once drawn up, it will ever be remembered that Bell first constructed the machinery for raising it.

It is instructive to remark and remember that Sir C. Bell did not make very numerous experiments on living animals; but, guided by a careful study of the anatomy of the parts, and reflecting on the spontaneous experiments, so to speak, furnished by disease, a few well considered, well planned experiments, discovered to him the way to learn truth, and enabled him to convert the guesses of former observers into admitted facts.

Had Sir Charles Bell not been a surgeon or a physiologist he might have been an artist, so admirable were his drawings, so exquisite his perception of the beautiful. This talent was with him a favourite, and might be cited as an instance of "the ruling passion strong in death;" for he was employed in sketching the gay scenery in Worcestershire but a few hours before his decease.

His love of art led him to Italy in the summer of 1840, that he might become more intimately acquainted with the master-pieces that enrich it.

During this tour he kept a journal, which I have had the gratification of seeing; it consists of three large books of remarks, illustrated by numerous sketches.

He passed through Paris and Lyons and entered Italy by way of Genoa. Here he was struck by the contrast between streets as narrow as "Blackford Wynd" and the gorgeous architecture of the palaces which flank them. His hotel had once been a palace, and as he sat on a velvet cushion in an arm-chair of gold, while a fountain played from a marble lion, and the too vivid light was moderated by orange-trees and silk curtains, he felt that he was in *Genoa la superba!*

He enjoyed what he calls "a day of Raphael in the Vatican," and was worthy of enjoying it. His piercing eye detected, as we might expect, some errors in the anatomy of Raphael's drawings; "but do not think of that," he adds, "but of the fine comprehension of nature—the feeling and understanding of the human family. Man appears a superb creature in the Vatican."

On the last day which he spent in Rome he stood by the Palace of the Cæsars, from which he took his sketch of the Coliseum. "It is a place," he says, "to raise strange and solemn thoughts"—"a mountain has been formed there by ruins, now covered with vineyards and cultivated fields—"Pillars and entablatures make the way uneven, and the acanthus is growing by the side of the broken capital on which it is chiselled."

So much fervour of feeling and such indefatigable industry are rarely united in the same person, and when we add the warmth of his friendship and, among his lesser qualities, the exquisite refinement of his taste, the combination is not often to be

paralleled. He had some of the irritability that so often accompanies genius; yet, take him as he was, he has left a blank not easily to be filled up, either in the republic of science or the circle of his friends.

The lecturer then proceeded to mention some particulars connected with the career of Baron Larrey. Entering into the military service of his country, Larrey quickly distinguished himself as a man of original mind, and as indefatigable in the pursuit of his profession. Nor was his singular ability superior to his humanity and strict integrity, qualities which endeared him to Napoleon, who said respecting him that "Larrey was the most virtuous man he knew."

With respect to John Hunter the lecturer gave some interesting particulars; but what could be expected to be *original* which referred to a man so well known to the profession. The lecturer retired amid great applause.

MEDICAL SOCIETY OF LONDON.

Jan. 30, Mr. PILCHER, President.

CHRONIC LARYNGITIS SUCCESSFULLY TREATED BY TRACHEOTOMY.

Mr. LINNECAR related the following case:—The patient was a lady, forty years of age, of spare habit, and had suffered from what was commonly called a cold and hoarseness for about three weeks. The hoarseness gradually increased in severity until the 4th of December, on which day she applied to Mr. Linnecar for advice. The following symptoms presented themselves:—There was almost constant ringing cough, with little or no expectoration; voice almost inaudible; breathing extremely difficult, requiring great exertion of the respiratory muscles, and attended with a somewhat croupy sound; swallowing much impeded, the attempt to swallow producing a distressing sense of strangulation. She also complained of headach, constriction at the upper part of the windpipe, and great oppression at the pit of the stomach. The chest was carefully examined; there was no evidence of disease extending beyond the larynx; pulse about 100, small, and rather hard; skin cool. She was ordered half a grain of tartar emetic and half a grain of opium every three hours. The next morning (the 5th) she was somewhat better, and the cough was less troublesome. Deglutition was still difficult, but the breathing somewhat easier. Eighteen leeches were now ordered to be applied to the throat, and two grains of calomel and half a grain of opium to be given every two hours. On the 6th the cough was again more troublesome, and the breathing and swallowing more difficult. A blister was now applied to each side of the larynx, and the calomel and opium continued. In the evening Mr. Linnecar was sent for in haste; he found the patient in the utmost distress; the breathing was almost annihilated, and there appeared no hope of saving her life except by the operation of tracheotomy. This was accordingly immediately performed by Mr. White, of Charterhouse-square, who had been called in by Mr. Linnecar. The operation was attended with much difficulty, from the circumstance of the patient being unable to lie down or even to throw the head back so as to raise up the trachea and put the integuments on the stretch. The introduction of the trachea tube was attended with much irritation, and it was retained in its position with great difficulty. The efforts to eject the tube, however, gradually subsided, and the patient after a time was able to lie down and procure a little sleep. The apartment was kept at a temperature of 60° or 65°. On the morning of the 7th she was much better, was free from fever, and breathed with ease, and entirely through the tube; the voice was quite gone. The secretion from the bronchi consisted of healthy mucus, which passed readily through the tube. Swallowing still almost impossible. Mercurial ointment was now ordered to be rubbed on the inside of each thigh; her strength was supported by injections of mutton-broth. The tube became obstructed by mucus in the evening, but this was removed quickly. On the morning of the 8th it was found that she had passed a quiet night. The mouth was now a little tender; a small quantity of air also now passed through the glottis, but the voice was still inaudible; swallowed a little but with much difficulty. From this time she gradually improved, and on Sunday, the 9th of December, the third day after the operation, the tube was experimentally removed, and the wound covered with wetted lint. The respiration continued easy, and it was thought unnecessary to reintroduce the tube, but a fit of coughing occurring almost immediately, suffocation was threatened from the phlegm not being able to pass through the glottis in sufficient quantity to clear the bronchi. Relief was immediately obtained by removing the dressing from the wound. The tube was replaced and retained until Wednesday, the sixth day after the operation, when it was finally removed. The voice was then natural, the respiration free, and the expectoration almost entirely by the mouth. The wound being left uncovered it gradually healed; indeed, scarcely any air passed through it on the following day. Mr. Linnecar had never seen a successful case of tracheotomy, though he had witnessed several cases in which the operation was performed in our public hospitals. He laid great stress on the value of warming the atmosphere of the room in which the

operation was performed. He preferred the use of a tube to the removal of a circular piece of the trachea, for he thought in the latter case that the edges of the wound might become thickened, and the passage of air into the lungs obstructed. The irritation produced by the tube was at first great, but it soon subsided.

Mr. KINGDON thought the two points for consideration in the case were the state of the atmosphere in which the operation was performed, and the period at which it was desirable to remove the tracheal tube. He thought that the leeches and blisters would have been more effectual had they been applied at a greater distance from the larynx.

Mr. HOOPER had seen many successful cases of tracheotomy in the hospitals. He related a case which occurred in his own practice. A dissipated, bloated man got very drunk and could not articulate; he got into a street-cab, and was driven about for several hours during a cold night. In the morning Mr. Hooper was called to see him, and found him suffering from severe inflammation of the throat. He was bled, purged, leeched, and blistered, but the inflammation increased rather than abated. At seven in the evening the breathing had become completely obstructed, and the man appeared to be dying. It was at once determined to open the trachea, which was found to be somewhat difficult from inability to lift up the patient's head. A small portion of the trachea was cut away, and a piece of quill, which was at hand, placed in the opening. Relief was immediate upon the operation, the patient laid down comfortably and went to sleep. A tracheal pipe was subsequently introduced and retained for three days; the inflammation in the upper part of the throat subsided, the external wound healed, and the man got quite well. In this case no caution was taken respecting the temperature of the room, which, however, was, no doubt, important.

Dr. ALISON had seen several successful cases of tracheotomy performed by Mr. Liston in the wards of the Edinburgh Hospital. The operation was not a formidable one when it was resorted to sufficiently early, and the inflammation was confined to the larynx or the upper portion of the trachea.

Mr. PROCTOR had seen the operation of tracheotomy in two cases of children with croup; they both died. He extolled the tartar emetic as a most effectual remedy in keeping down action in cases of inflammation.

Mr. LINNECAR, in answer to Mr. Kingdon's remark, applied leeches over the trachea; they had been useful. Recollecting Dr. Farre's caution, he had placed the blisters as far off the seat of mischief as possible; they were located on each *side* of the throat.

Mr. PILCHER said, that the operation of tracheotomy was a most important and interesting one. It was doubtless a very unsuccessful operation in infants suffering from acute laryngitis, and in them in consequence of the large quantity of fat over the trachea, and the movement up and down of the passage in the convulsive efforts to breathe, it was a difficult operation. Sometimes, too, a small quantity of blood got into the trachea, and the little patient died upon the table. In adults, where the trachea was superficial, and who, knowing the value of life, were able to keep comparatively quiet, the operation was not so difficult. He had performed the operation on two children, one with croup, the other with a foreign body in the air-passages. Both patients died, the latter not from the operation, but from the mischief produced by the foreign body. He had tried the effect in one case of passing a tube up into the larynx through the wound made by the operation; the patient was thrown nearly into convulsions. The tube passed downwards without producing much irritation. The excito-motory doctrine explained these phenomena.

Mr. BISHOP inquired whether an elastic tube passed through the larynx, in some cases of obstruction in that organ, might not be preferable to tracheotomy?

Dr. MARSHALL HALL had seen the operation performed in five cases. One of these was a case of chronic laryngitis, a very rare disease, and he believed never occurring to children. In them it was always tracheitis. No benefit would result from tracheotomy unless the disease was confined to the larynx. In the first case in which he had seen tracheotomy performed the patient was an elderly woman, who suffered from difficulty of breathing and swallowing, consequent upon chronic laryngitis, and augmented in paroxysms. One symptom of her complaint, which was diagnostic of the disease, consisted in the inability to snuff up the nostril, as it was necessary to effect this that there should be a certain quantity of air respired. In this case the effort to mercurialise the patient failed; tracheotomy was performed. The tube was retained for some months; the woman did well, and was living still. This case was recorded in the 10th volume of the "Medico-Chirurgical Transactions." In the other four cases the patients were all children. In one the larynx, trachea, and bronchial tubes, were found affected after death; in the second case the child had obstructed breathing from a scald of the glottis; the patient seemed in this case to die of secondary asphyxia, and in another case the child died from the hæmorrhage consequent upon the operation. He threw out a hint that the operation of tracheotomy might be serviceable in those cases of apoplexy following epilepsy, in which

the patient died from impeded respiration in the larynx.

A MEMBER had seen the trachea fixed by a hook in a case of tracheotomy performed by Mr. Quain at University College Hospital; the proceeding was thereby facilitated.

After a few words from other members the society adjourned.

Feb. 6th.—The society was occupied this evening by a discussion on scarlet fever. From the statements of the various speakers, the disease would appear to be epidemic in some localities, whilst in others not a single case had occurred. With respect to the treatment of the disease nothing new could be suggested, and with regard to the prophylactic power of belladonna no satisfactory evidence could be given.

ROYAL MEDICO-BOTANICAL SOCIETY.

Jan. 25. Dr. SIGMOND, in the chair.

MR. FOOTE, senior secretary, read a paper by M. Guibourt on the Ceylon moss, a large quantity of which had been sent to M. Guibourt by a pharmacien at Nantes. The moss has been described and figured by Turner under the name of the fucus lichenoides, by Agardh as the sphæro-coccus lichenoides, and by Lamaroux as the gigartina lichenoides. This, moss or alga, is in whitish ramifying filaments, about three or four inches long, and about the thickness of strong sewing-thread. It appears to be cylindrical to the naked eye, but under the microscope it offers an unequal, and, as it were, nervous or reticulated surface. Its branches are either dichotomous, pedulated, or simply alternate. It has a slightly saltish savour, and is scarcely, if at all, soluble in cold water. Iodine colours it of a blackish blue, mixed with a red tint; it therefore contains amylaceous matter.

The Ceylon moss affords by boiling an abundant nutritious jelly, admirably suited for invalids and for persons convalescing from long illness. The residue of the decoction may also be employed as food; it may be dressed in the same manner as the leguminous vegetables. Such, in fact, is its principal use in the country where it is indigenous.

Some fine specimens of native medicinal plants were placed on the table by Dr. Houlton, among which was the prunus lauro-cerasus, with respect to which Dr. Houlton mentioned that a patient of his who had been engaged for several hours stripping the leaves from the branches, was after a time seized with all the symptoms of poisoning by prussic acid, from which he recovered by the use of medicinal and dietetic stimulants.

Feb. 8th. Earl STANHOPE, President, in the chair.

THE ARTEMISIA ABSINTHIUM.

Dr. HOULTON read a paper this evening on this subject. The common wormwood, he said, had been noticed as a medicinal plant from the earliest period of medico-botanical history, and although it entered into many officinal preparations of the continental pharmacopœias, had not been admitted into our own since 1788. It had, however, never been rejected from the materia medica of the Royal College of Physicians. It is at the present time but little employed in the regular medical practice of this country. It is a well-known perennial plant, growing in various parts of Europe, the Crimea, Barbary, and Newfoundland. We have several other indigenous species of the same genus; the only one whose resemblance might lead to a mistake is the artemisia vulgaris, or mugwort. The stem of this is of a dark purplish colour, whilst that of wormwood has a white hoary appearance; also the intense bitterness with some pungency, and the strong fragrant odour of wormwood, readily distinguish it from the mugwort, which is but slightly bitter. Although no writers have disputed the virtues of the artemisia absinthium, some have objected to its employment as a medicine on account of its nauseous flavour; and Dr. Murray says, in the "Apparatus Medicaminum," that in all cases the more grateful bitters should be preferred in practice, but the flavour and odour, though disagreeable to some persons, is not so to all. It has had numerous medicinal properties ascribed to it, the chief of which are antiseptic, anthelmintic, deobstruent, tonic, and stomachic. It has been employed with success in jaundice, dropsy, gout, worms, dyspepsia, intermittent fevers, and various kinds of cachectic diseases. It has been said by some to have a narcotic property. Linnæus asserts he has never remarked any narcotic effects resulting from its employment: some have attributed to it the power of rendering bitter the flesh and milk of animals who take it, and have asserted that infants at the breast have been affected by the milk of mothers who have taken the extract. The plant has been employed in the form of powder, extract, conserve, tincture, wine, distilled water, and essential oil. The doses ordered in works on materia medica appear too large; for instance, half a drachm of the powder, or an ounce and a half or two ounces of the infusion made with six drachms of the herb to twelve ounces of water. An infusion made with half a drachm of the dried herb (freed from the stalk) and ten ounces of boiling water, allowed to stand for an hour, will produce an infusion sufficiently strong; an ounce and a half may be taken as a dose three times a-day. The tincture made in the

following manner is the best preparation:—Take two ounces of the dried herb free from stalk, and sixteen ounces of rectified spirit. Macerate for twelve days and strain.

This possesses the aroma and bitter flavour of the plant in a high degree, and is, when recent, of a beautiful green colour, which fades in keeping; ten or fifteen minims strongly flavour two ounces of water, and form a good stomachic draught. Wormwood is an aromatic tonic, admirably adapted for the many cases of chronic diseases where it is desirable to support the tone of the stomach; this is evident from the happy results that have followed its administration in cases where debility of the digestive organs has been the chief feature.

Some discussion followed this paper, in the course of which it was stated that Dr. Elliotson, at University College Hospital, in prescribing the artemesia absinthium, found it to possess advantages over many other tonics. It appeared also to avert attacks of epilepsy in those cases in which the affection appeared to be connected with anemia of the brain.

SOME ESCULENT ACORNS

were also exhibited by Dr. HOULTON, who read a communication respecting them from Mr. William Lukin.

The sweet acorns are the fruit of the dyinheira, the quercus ilex of Linnæus. It is a tall forest tree, very frequent in the forests south of the Tagus, but rarely found north of that river. It is extensively planted in the oak woods of the Alemtejo for the hogs which are driven in large herbs into the woods to fatten on the fruit. There are two other trees, quite distinct in character, which produce sweet acorns, and are found in the same woods, but are not frequent. 1. Quercus rotundifolia, of Lamarck. 2. Quercus ballota, of Des Fontaines. Brotero, in his "Flora Lusitanica," considers both these as varieties of the former; they are smaller trees; all three are evergreen, and the fruit so similar that it is difficult to distinguish between them without seeing the leaf. These acorns are served up with the dessert in Spain and Portugal, roasted like chestnuts; they are much used by the peasants, who eat them roasted. That this is a custom of some antiquity may be seen by referring to a humorous letter in "Don Quixote," in which Cervantes represents Theresa Panza as sending a peck of ballotas to the duchess, in acknowledgment of the hospitable reception her husband, Sancho, had met with at the castle.

A variety of fine specimens of various new preparations were exhibited from the laboratory of Mr. Bullock. At the meeting on Wednesday, the 22rd inst., the subject of some preparations of the Indian Pharmacopœia will be brought before the society by Dr. O'Shaughnessy.

BRITISH MEDICAL ASSOCIATION.

EXETER HALL, Feb. 7th.—This evening (Dr. Webster, president) Mr. J. King, of Portland-terrace, Regent's-park, and Mr. R. Cross, of Leicester-square, were elected councillors in the place of Dr. Ifill and Mr. Coleby, resigned. A communication was read from Sir J. Graham. It was afterwards resolved, on the motion of Mr. Sept. Read, seconded by Mr. Bottomley, "That a deputation be appointed to wait on the Worshipful the Society of Apothecaries, on the present position of medical affairs." Letters having been read from Mr. Higgins, secretary to the West Somerset Medical Association, and Mr. Carter, secretary to the North of England Medical Association, on the formation of a medical faculty, two addresses from the Glasgow Medical Association to the medical practitioners in the west of Scotland, were read, and being highly approved of, one of them as applicable to the present state of medical affairs, and the second as illustrative of the good effect of unity and perseverance in the profession, the council would recommend them to the attention of all medical reformers. The following are the leading features of the first of these two addresses, dated Glasgow, February. The second mentioned will form the subject of some remarks, on another occasion, with reference to certain proceedings of a certain gentleman known in Scotland by the title and name of Mr. Sheriff Alison.

The president and councillors of the Glasgow Association thus address their medical brethren:—

Our object (they say) is to call the attention of our brethren to the question of medical reform, at a time when there is every probability that it will be once more brought under the consideration of the Legislature.

Although the members of this association felt painfully disappointed at the reception which the subject encountered during the late Parliament, yet we are convinced that the delay to which the question was then subjected, far from injuring, has consolidated and strengthened the cause, and an earnest wholesome agitation has since been in progress amongst medical reformers, extreme views have been modified, different shades of opinion have been blended, the propriety of making certain concessions to expediency has been recognised, and medical reform has thus acquired a weight and force which unanimity in the pursuit of an object can alone confer. With this conviction we direct attention to a few points in connection with its present aspect.

It is well known that two Bills of Messrs. Warburton and Hawes, and the draft of a third, from the British Medical Association, were submitted to the professional public, and much discussion ensued upon their details. These three Bills agreed in one im-

portant point, namely, the institution of a central governing body, which the members of our association regard as the key-stone of medical reform, and in contending for which matters of detail should be disregarded, and minor differences of opinion merged.

If this system of government were representative of the whole body of medical practitioners, it is certain that the interests of the great mass of the profession would obtain the public countenance and consideration of which they have long been deprived. On these grounds we urge upon our brethren the propriety of concentrating their voices upon a representative and uniform scheme of government, as a leading measure in medical reform.

The members of this association have observed that a section of medical reformers has had a desire to give the medical corporations time to bring forward *their* scheme of reform. But what can the corporations effect towards medical reform? They may enjoin a uniform scheme of medical education, they may recognise the licences of each other; but they never can nor will grant to the great mass of the profession that consideration in the medical body politic to which equal attainments, equal qualification, and equal responsibility are entitled. With less than this the profession will not now rest satisfied.

The corporations, called into existence as they have been for the protection of medical practice, have utterly failed in fulfilling the objects of their institution; and have essentially resolved themselves into mere boards of examination for such as voluntarily come before them. As such let them remain, but let their public acts be subject to the control of a central council.

We would impress upon our brethren the propriety of communicating with their respective parliamentary representatives, and of endeavouring to secure their presence in the House of Commons when the question of medical reform comes to be discussed, so that it may at least have an opportunity of a fair hearing.

ST. THOMAS'S HOSPITAL.

EXAMINATION OF THE BODY OF MR. RICHARD CARLILE.

The well-known Mr. Richard Carlile, bookseller, late of Fleet-street, bequeathed his body for the purpose of anatomical dissection. By permission of the governors of St. Thomas's Hospital his remains were removed from his residence in Bouverie-street, Fleet-street, to that institution, and on Tuesday last there was a numerous assemblage of the friends of the deceased and members of the medical profession, in the anatomical theatre, to witness his post-mortem examination. The chest and abdomen merely were opened, and the necessity that existed for the knowledge of anatomy, not only to the surgeon, but to the physician, was shown. Mr. Grainger, delivered a short address on the occasion, thinking that the object of the deceased would be obtained by this simple proceeding in public, and by a statement of the motives which had actuated him in giving his remains for dissection.

The illustrious Bentham, actuated by the same benevolent feeling, had, at the close of the last century, left his body for dissection, and that at a time when the prejudice against anatomical examinations was so great that bodies were procured with the utmost difficulty. The popular feeling against dissection was, perhaps, at the present period, less than at that time, but still sufficiently strong to interfere very materially with that due supply of subjects which was so essential to the proper education of the medical student, and of such vital importance to the community at large. Mr. Carlile deserved the approbation of all friends of humanity for attempting to remove this prejudice by leaving his remains for anatomical purposes.

Mr. Grainger dwelt on the importance of a knowledge of anatomy to every person practising medicine or surgery, and illustrated this by some well-known examples, as operations for hernia and aneurism, and of injuries to joints and fractures. He said that the present Anatomy Act was in a great degree inoperative, and that during the early part of the session many students could not obtain subjects, and idle habits were thus engendered in them, or they at least were subjected to a great loss of time. He feared that no Government would be bold enough to bring in a Bill which would remedy this defect in the present state of the public mind respecting post-mortem dissections. He remarked that he had often been placed in a most unpleasant position by being unable to obtain subjects on which country practitioners could refresh their anatomical knowledge previous to the performance of an operation. What an amount of injury to the living must result when medical practitioners were ignorant of anatomy!

He proceeded to show that the difficulties in the pursuit of anatomical knowledge were such, in this country, that no lecturer had ever yet been able to complete a course of operative surgery, properly so called, and that many students, to become proficients, were obliged to repair to France for the purpose of obtaining a necessary supply of subjects. In the case of a war this resource would be cut off.

He vindicated medical men from the charge of irreligion, and contended that medical and anatomical studies, if *properly* pursued, served to demonstrate the truth, not only of natural, but of revealed religion.

VACANT CORONERSHIP IN DURHAM.

On Feb. 10th, a meeting of freeholders was held in Gateshead, to take the subject of the vacant coronership, with reference to the eligibility of a medical candidate, into consideration.

Captain Burn, of Sunderland, was called to the chair, and produced a letter from Mr. Morrison, of Pelaw-house, in elucidation of his decided opinion that a medical gentleman was the fittest to fulfil the peculiar duties of coroner.

Dr. Knott moved the first resolution, to the effect that, in order to preserve the character, dignity, and, above all, the public utility of the office of coroner, it was indispensably necessary that the individual holding the office should be possessed of medical education and experience. The resolution was carried unanimously.

Dr. Elliot moved,—That the intelligence and experience of Mr. Nixon, surgeon, eminently qualified him for the office, while the numerous promises of support which had been tendered to him convinced the meeting of his success at the forthcoming election. The motion was carried unanimously.

It was further resolved, that the meeting earnestly invite the freeholders to support Mr. Nixon, and that the thanks of the meeting were especially due to the Bishop of Durham and the Dean, for the spirited mode in which they had supported certain views of the meeting.

Prosecution of Mr. Beale.—(*From a Correspondent.*)—We are informed that the cause of the Society of Apothecaries *v.* Beale, which was expected to have come on for trial in the Court of Queen's Bench, on Monday last, will not be tried. The action was instituted by the Society of Apothecaries against Mr. Thomas Beale, of Bedford-square, East, Commercial-road, who is a member of the Royal College of Surgeons, for the recovery of several penalties for having practised as an apothecary without possessing a legal qualification for such practice. The defendant having shortly previous to the trial submitted to pay one penalty of 20*l.*, together with the costs of the action, the society deemed that the object of their proceedings had been sufficiently attained by this submission to the law, and that they might, consistently with their public duty, abstain from pressing for payment of the remaining penalties.

ROYAL COLLEGE OF SURGEONS IN LONDON.

List of gentlemen admitted members on Friday, Feb. 18, 1843:—D. Morgan, A. L. T. Cooke, T. Graham, S. P. Goddard, W. K. Park, G. F. Fox, H. Payne, J. C. Bonnett, J. S. Wollett, R. Chambers.

BOOKS RECEIVED.

Two Lectures on the Defective Arrangements in Large Towns to secure the Health and Comfort of their Inhabitants. Read before the Hull Lit. and Phil. Society, in 1842-43. By Humphry Sandwith, M.D., Physician to the Hull Infirmary. London: Simpkin and Co., 1843. Pp. 55.

Pharmacologia, being an extended Inquiry into the Operations of Medicinal Bodies, upon which are founded the Theory and Art of Prescribing. By J. A. Paris, M.D., &c. Ninth Edition, re-written in order to incorporate the latest Discoveries in Physiology, Chemistry, and Materia Medica. London: Highley, 1843. 8vo, pp. 622.

NEWS AND CORRESPONDENCE.

A correspondent (*S. C.*) wishes to have a sound opinion or two from some of our readers as to "what application they find the most effective in removing venereal warts." He says that he has "tried a vast number of remedies without effectually destroying those excrescences."

The excellent and caustic criticism of *Dr. Brown*, of Boston, on the proceedings of the "mesmerisers" in that town, should have a place in our columns, but we have been compelled to decline inserting a large number of similar communications from other correspondents, first of all from wanting space to continue long controversies in print, and, secondly, from a consideration that the impositions of the jugglers practising on the youths and girls are not worthy of formal attack in the metropolis, whenever and wherever they choose to appear in public. The mass of the profession knows well their tricks and deceptions. The general public should be addressed in the local newspapers, which they see universally and instantly.

We insert the following letter and abnegations of statements made in The Lancet of Jan. 14, 1843, page 584-5, agreeably to our promise of Feb. 4th:—

To the Editor of The Lancet.

Sir,—Having inserted in your periodical a statement taken from the "Medical Gazette," and signed "M.D.," you cannot, in common fairness, refuse a place to the answer herewith. I remain, Sir, your obedient servant,

A Homœopathic Physician.

To the statement "*Though in her confinement, eighteen months ago, she* (Lady Denbigh) *nearly lost her life by homœopathic treatment*," the Homœopathic Physician replies, "At the period alluded to the noble lady was under the care of Mr. Barnes, took no homœopathic medicine (Dr. Dunsford being absent), and the case was brought to a satisfactory termination under that gentleman's auspices." The Homœopathic Physician gives a flat denial to the following

statements:—That "this lady was of a very plethoric habit" (Messrs. Barnes and Stone, he says, always considered her the very reverse); that the watching a plethoric habit during gestation is against the principles of Hahnemann; that the homœopathic medicines given had no power in *checking* the convulsions; that no accoucheur was present, but that, "by accident, a medical man of some eminence was in the house" (this medical man, he says, was Mr. Barnes, the usual obstetrix* of the lady in question); that "the homœopathic doctors spoke confidently;" and that "apoplectic coma followed."

The Homœopathic Physician appends the report of the appearances on the post-mortem examination, but we need only extract the final sentence, &c.:—

"The state of the brain was the result of disease of considerable standing, and could not be remedied by any particular treatment.

"Signed, { G. Fincham, Harris Dunsford, M.D., A. B. Barnes,"

remarking that two of the above, Messrs. Fincham and Barnes, are not homœopathic practitioners.

The long statement of Dr. Curie is scarcely calculated to second very forcibly the "Homœopathic Physician's" rebutment of "M.D.'s" assertions. It is an essay on homœopathy, which, independently of other objections, is too long for The Lancet, unless, as we before stated, in the shape of an advertisement; and as Dr. Curie may prefer to give it publicity in another form, it is left for him at the Lancet-office.

A Reader.—The "bond" is not worth a farthing, unless an *adequate* consideration was given for signing it. The holder would not move one step in any court of law in the kingdom (that is to say, if our correspondent has correctly described all the facts), against the subscriber, on the faith of possessing it.

Extra-Licentiates.—*To the Editor.*—Sir: In The Lancet for Jan. 21st, page 632, a correspondent asks "if extra-licentiates of the Royal College of Physicians, London, can correctly designate themselves as members of that body?" to which you reply that the law under which the persons referred to hold their licences does not justify the designation. I confess that I at first read the inquiry with surprise at the simplicity of your correspondent. As well might he have asked if a sizer was entitled to call himself a "fellow of St. John's." But the reference made by your correspondent to graduation at "Erlangen, or other like M.D. manufactories," raises a suspicion in my mind that the writer, under a general inquiry, meant to have it inferred that some "person" had been guilty of this bold abuse of truth and decency, in short, that the writer knew a case where an extra-licentiate had designated himself in print as a member. Now, Sir, I am very sure that you will agree with me that this is an imputation of too grave a character, involving, indeed, as I read it, a charge of fraud, to be lightly received by the profession at large, and more especially by gentlemen holding the diploma of extra-licentiates. I therefore call upon your correspondent to withdraw this general imputation, or to substantiate it by referring to the particular instance of which he appears to complain. I have the honour to be, Sir, your obedient servant,

Feb. 9, 1843. Chirurgus.

Is an unqualified person admissable to give evidence as a medical witness at a coroner's inquest, and is not such an individual amenable to the penalty of the Apothecaries' Act by giving such evidence in a medical case?—Zeno. **** If the coroner chooses to receive the evidence, whether declaratory of facts or opinions, the person can give it, being liable to no prosecution or penalty under any Act. But the witness has not a legal claim for a fee for his evidence under the Medical Witnesses' Act.

Lancastriensis.—Not justified, most certainly. An inquest should have been held on the body. The law with regard to such cases is strange and inconsistent. Had the patient been maimed or injured for life, or otherwise seriously damaged, but not mortally, he would have had ground of action for damages against the negligent party. But, being *dead*, his survivors and representatives have no remedy in the way of claim for penalty against the "attendant."

Delta.—There is not in London any institution receiving in-patients affected with the diseases in question, or containing particular *wards* appropriated to such patients, nor any institution for out-patients that is worthy of mention as a place of resort for their cure.

Mr. E. Haughton ought not to have made any statement of his charges for mileage before the Commissioners. The simple question at issue between Mr. Haughton and his tormentor was this:—Did Mr. H. use his horse *only in the exercise of his professional duties?* If an answer to that question could be given in the affirmative, the Commissioners have violated the law in not making the demanded allowance. On that point not a shadow of a doubt can exist. A reference to the Act will prove the scrupulous accuracy of this decision.

J. M. P. had better not make experiments on either very possible event.—*Mr. Atkinson's* note and *Mr. Hodgins'* case, probably next week.—The request of *Mr. Wood*, and the circular of *Judas*, sent by *Mr. Nankivell*, came too late for attention this week.

The paper communicated by *Professor Grant* shall receive early attention.

* Printed as written.